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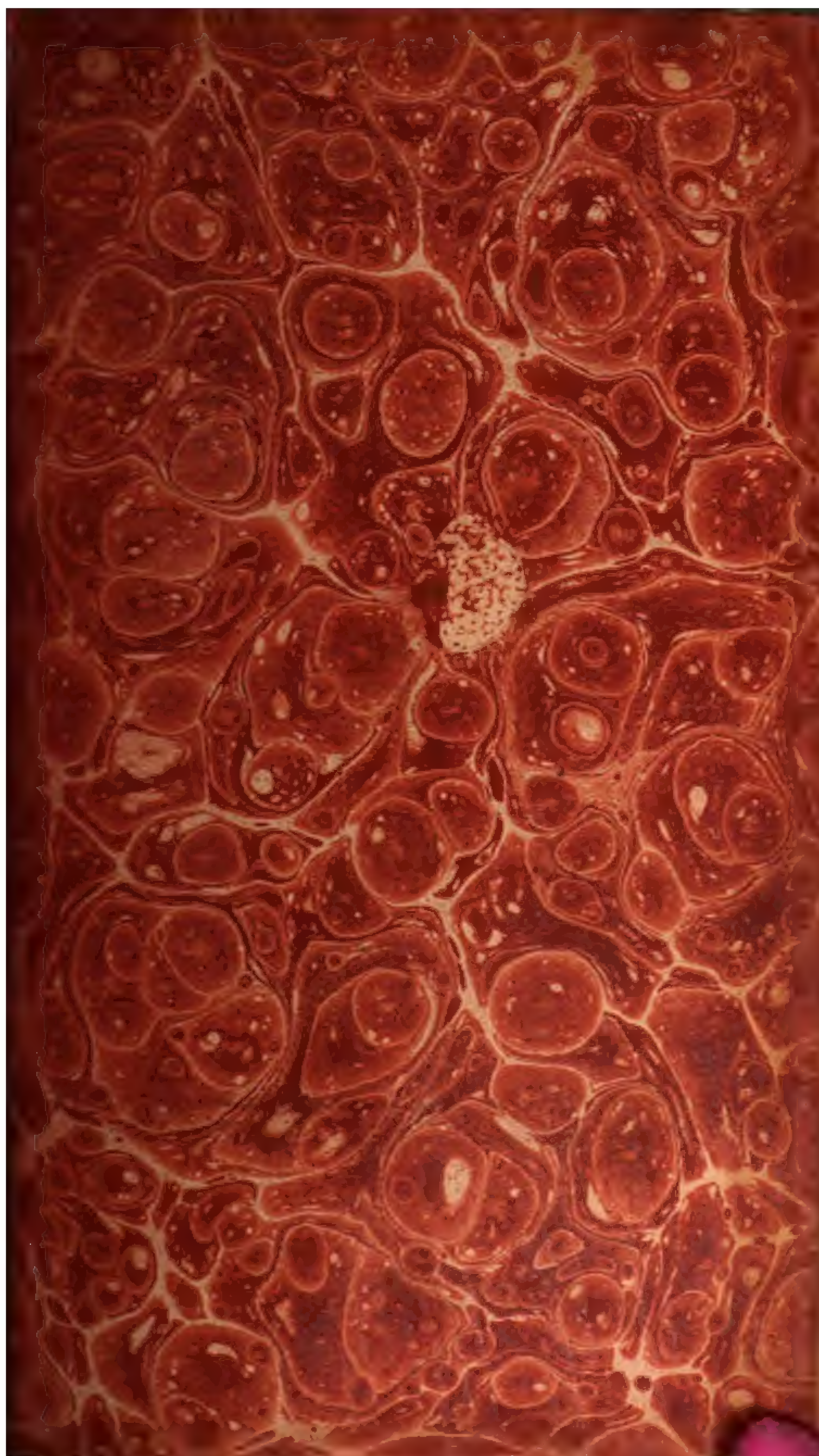
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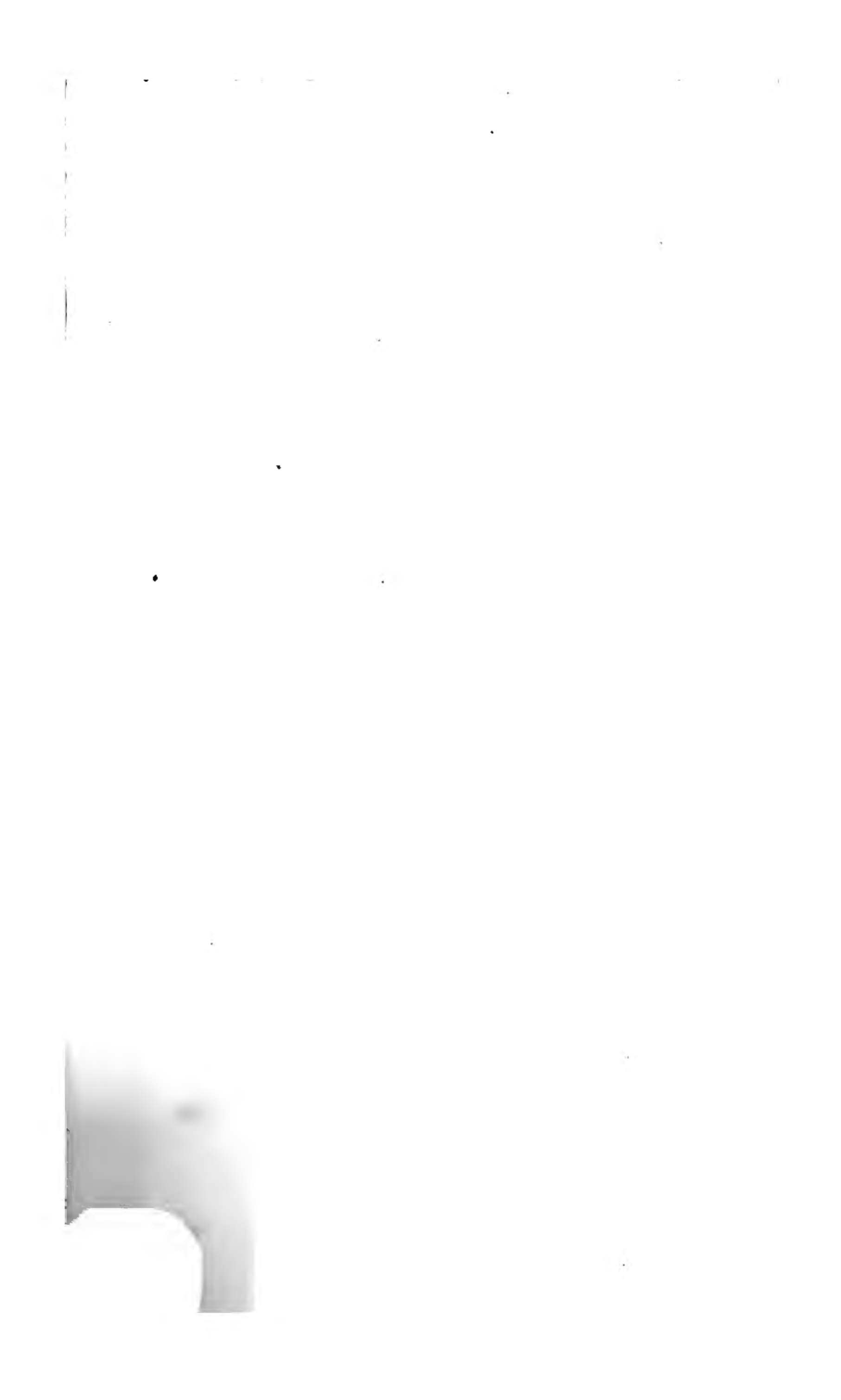






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ENGLISH BOTANY;
OR
COLOURED FIGURES
OF
BRITISH PLANTS,
WITH THEIR
ESSENTIAL CHARACTERS, SYNONYMS, AND
PLACES OF GROWTH.

TO WHICH WILL BE ADDED
OCCASIONAL REMARKS

BY
JAMES EDWARD SMITH, M.D. F.R.S.
MEMBER OF THE ROYAL ACADEMIES OF TURIN, UPSAL,
STOCKHOLM, LISBON, ETC. ETC.
PRESIDENT OF THE LINNÆAN SOCIETY.

THE FIGURES BY
JAMES SOWERBY, F.L.S.

—“VIRESCERE ACQUIRIT RENDO.”

Virg.

VOL. IV.

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CHIRONIA Centaurium.
Common Centaury.

PENTANDRIA Monogynia.

GEN. CHAR. *Corolla* salver-shaped. *Stamina* inserted into the tube. *Antheræ* becoming spiral. *Style* declining. *Seed-vessel* of two inflexed valves.

SPEC. CHAR. Stem herbaceous, dichotomously panicled. Leaves ovato-lanceolate. *Calyx* shorter than the tube.

SYN. *Chironia Centaurium.* *Curt. Lond. fasc. 4. t. 22.*
With. Bot. Arr. ed. 3. v. 2. 255. *Sibth. Ox. 75.*
Woodv. Med. Bot. t. 157.

Gentiana Centaurium. *Linn. Sp. Pl. 832.* *Huds. Fl. An. 102.* *Relh. Cant. 100.* *Dicks. H. Sicc. fasc. 7. 3.*

Centaurium minus. *Raii Syn. 286.*

A FREQUENT inhabitant of dry gravelly or chalky pastures, scarcely to be cultivated in a manured soil, flowering in the latter part of summer; its blossoms close as soon as gathered, and against rain.

Root small, branching, annual. Stem solitary, erect, about a foot high, with 4 sharp edges, leafy, terminating in several opposite, forked, flowering-branches, which altogether form an upright panicle. Leaves opposite, sessile, entire, 3-nerved, the radical ones somewhat spatulate, the rest lanceolate or elliptical. Each flower is sessile, erect, with a greenish tube, and beautiful pink-coloured polished limb. Segments of the calyx narrow and sharp, about half as long as the tube, to which they adhere. *Antheræ* incumbent, twisting into a spiral form as they ripen, which is essential to a true *Chironia*, though not observable in all that *Linæus* has called so; see *Icones pictæ plant. rar. tab. 18.* The style is declining; stigma capitate, with a transverse notch. The whole herb is smooth, very bitter, well known among rustic practitioners as a stomachic by the name of Lesser Centaury.

Mr. Curtis first referred this plant to its right genus, but neglected to give it a specific character, the definition for which Dr. Sibthorp quotes him having been given by *Linæus*, and intended to distinguish it from other species of *Gentiana*, not of *Chironia*. Botanists are often strangely incorrect about essential characters. They indeed require genius and accuracy, but they are the perfection of the art. Dr. Stokes has made several excellent remarks on this plant in the 2d edition of *Withering*



1937

CHIRONIA littoralis.

*Dwarf Tufted Centaury.**PENTANDRIA Monogynia.*

GEN. CHAR. Cor. salver-shaped. Stamens inserted into the tube. Anthers becoming spiral. Style declining. Seed-vessel of two inflexed valves.

SPEC. CHAR. Stems herbaceous, simple, straight. Leaves linear-obovate. Calyx-teeth awlshaped. Flowers densely corymbose, nearly sessile.

SYN. Chironia littoralis. *Turn. & Dillw. Guide*, 469. *Winch. v. 2. pref. 3.*

Ch. pulchella. *Don. Herb. Brit. fasc. 1. 7.*

WE are obliged to Mr. Winch for a fresh wild specimen of this pretty *Chironia*, which we find no difficulty in admitting as a new one, certainly distinct from those in our t. 417 and 458, as well as from the varieties, or possibly species, mentioned in *Fl. Brit.* 1393. Mr. Brodie of Brodie observed it on the sea coast in Elginshire, near his residence. It is very abundant on Holy Island, and the neighbouring coast of Northumberland, flowering in June, much earlier than *Ch. Centaurium*. Mrs. Dowson of Geldeston brought it us from Wales.

The root is annual. Stems about two inches high, generally solitary, sometimes accompanied by one or two smaller ones, all stiff and straight, leafy at the top and bottom only. Leaves obovate, narrow, obscurely three-nerved, nearly uniform. Flowers large and handsome, with obtuse segments, numerous, almost sessile, in a very dense forked corymbus. Mr. Turner observes that the comparative proportions of the calyx and tube of the corolla vary. The style is scarcely declined in this species, though it is so in *pulchella*. The anthers are twisted when old or dry.



Geranium

✓

CHIRONIA pulchella.

Dwarf branched Centaury.

PENTANDRIA Monogynia.

GEN. CHAR. Cor. salver-shaped. Stamina inserted into the tube. Antheræ becoming spiral. Style declining. Seed-vessel of two inflexed valves.

SPEC. CHAR. Stem herbaceous, much branched all the way up. Leaves ovate. Calyx-teeth awl-shaped, above half as long as the tube. Flowers on stalks.

SYN. Chironia pulchella. Swartz in Stockholm Trans. for 1783, p. 85. t. 3. f. 8, 9. With. 255.

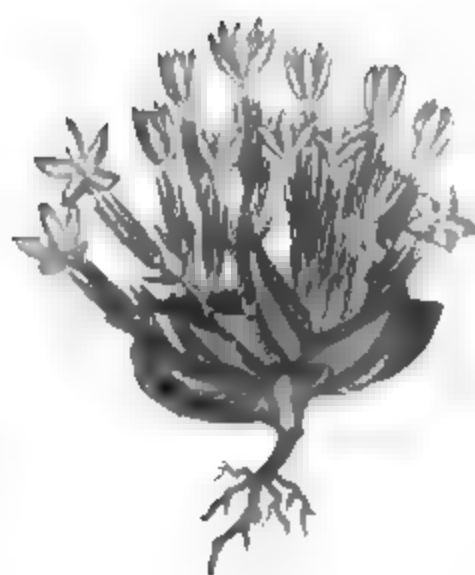
Gentiana Centaurium β Linn. Sp. Pl. 333. With. 255.

Centaureum minus, palustre, ramosissimum, flore purpureo. Vaill. Paris. 32. t. 6. f. 1.

SENT from Gorleston Norfolk, near the sea, by D. Turner Esq. where it was first found by Robert Stone Esq. a gentleman to whom the botany of Norfolk and Suffolk is much indebted. Dr. Withering received it from Cornwall. It appears to be annual, flowering in September.

Root small, branching. Stem very much branched from the bottom, forming a low bushy herb very various as to luxuriance, forked, smooth, with 4 sharp edges. Leaves ovate; the lower ones very broad; those which accompany the upper flowers lanceolate. Flowers not sessile as in *C. Centaurium*, t. 417, but on shortish stalks, from each divarication of the stem, erect. Calyx deeply divided into 5 narrow awl-shaped segments, more than half as long as the tube of the corolla, which is extremely slender and membranous; the limb is of a full pink, more delicate and narrow than that of *C. Centaurium*. Neither do the antheræ twist so much in ripening as those of that species, making scarcely one turn. In the germen, style, &c, we have found no great difference. Our figure of the *Centaureum* represents the stigmas closed, and partly fading; in that of the *pulchella* we have drawn them spreading, as before impregnation. Capsule long, cylindrical, invested with the corolla. Seeds very numerous.

We are certain from the specimen communicated by Rosen to Linnæus that this is his *Gentiana Centaurium* var. β , and we are equally certain from Dr. Swartz's original specimen that it is his *G. pulchella*, though he describes his with a simple stem and solitary flower, having met with it only in a starved state. The characters above given seem to make it distinct from *Centaureum*, though both species vary so much in luxuriance that they sometimes approach very near each other in that respect. The Linnæan Herbarium has a Swedish plant referred to *Centaureum*, in which the calyx is longer than the tube, leaves narrow, spatulate, and the stem unbranched. We suspect it must be different from both the above, but have not observed it in England.



March 1790 Published by J. Leach & Co. London

SAMOLUS Valerandi.
Brook-weed, or Water Pimpernel.

PENTANDRIA Monogynia.

GEN. CHAR. Cor. salver-shaped, 5-cleft, with intermediate scales. Stam. inserted into the tube, opposite to the segments. Caps. half inferior, of one cell, with 5 teeth.

SPEC. CHAR. Leaves blunt. Cluster many-flowered. A small bractea on each flower-stalk.

SYN. Samolus Valerandi. Linn. Sp. Pl. 243. Sm. Fl. Brit. 259. Huds. 94. With. 246. Hull. 52. Relb. 92. Sibth. 79. Abbot. 49. Curt. Lond. fasc. 4. t. 20. Raii Syn. 283.

THE Water Pimpernel is found, as Linnæus mentions, in almost every quarter of the globe and under very different latitudes. We have had occasion to remark that this circumstance, however uncommon with plants as well as animals in general, happens to several aquatics. The *Samolus* has little affinity to its neighbouring genera in the 5th Class of Linnæus, for instead of the natural order of *Lyfimacbiæ* to which M. De Jussieu refers it, I cannot help considering it, more especially from its approximation to *Montia*, as belonging to his *Portulacææ*; and Mr. Dryander has well observed that the *Sheffieldia* of Forster, a New Holland plant, is but another species of *Samolus*.

S. Valerandi is not very common in England or Scotland. It occurs chiefly in clear watery boggy places upon a gravelly soil, flowering in July, and is perennial.

Root of many simple fibres. Whole herb smooth, pale-green, a little succulent, about a foot high. Stem round, terminating in one or more long clusters of numerous white flowers, each on its own flower-stalk, in the middle of which stands a small bractea. The leaves are alternate, obovate and entire. Stamina included within the corolla, which is a little longer than the calyx. Five small scales between the lobes of the corolla form the essential generic character. The capsule is rather more below than above the calyx, and opens with 5 teeth at the top.

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LONICERA Caprifolium.

*Pale perfoliate Honeysuckle.**PENTANDRIA Monogynia.*

GEN. CHAR. Cor. of 1 petal, irregular. Berry inferior, of 2 cells, with several seeds.

SPEC. CHAR. Flowers ringent, whorled, terminal. Leaves deciduous; the uppermost united and perfoliate.

SYN. *Lonicera Caprifolium.* *Linn. Sp. Pl.* 246. *Sm. Fl. Brit.* 260.

Periclymenum perfoliatum. *Ger. em.* 891.

THE first information of this as a native of Britain was communicated to me by the Rev. T. Butt of Areley, Staffordshire, who found it plentifully in a wood near Elsfield Oxfordshire. I hesitated to admit a plant so common in gardens; but Mr. Relhan having discovered it at Hinton, Cambridgehire, in his opinion certainly wild, I could no longer refuse it a place in the *Flora Britannica*. It has probably been overlooked as one of the many varieties of the Common Honeysuckle, from all which however it is perfectly distinct, and easily to be known by the upper leaves being perfoliate, not to mention many other marks. It flowers in May or June.

The woody twisting stem climbs upon bushes and trees, and is clothed with opposite entire smooth leaves, glaucous beneath, all which are in some degree connate by their footstalks, but one or two of the uppermost pairs are perfectly united and perfoliate. The flowers grow in whorls, sessile in the bosoms of these upper leaves, and are fragrant, yellowish, with a blush-coloured tube. Their structure is ringent, one segment of the border being much deeper than the rest and greatly divaricated. Berries elliptical, orange-red, crowned with the almost entire calyx.

The fruit only in our figure is taken from a garden specimen, the rest from a wild one gathered at Hinton by J. Holme Esq. of Peter-house, Cambridge.



7929



L O N I C E R A Periclymenum.

Common Honeyfuckle, or Woodbine.

PENTANDRIA Monogynia.

GEN. CHAR. *Cor.* of 1 petal, irregular. *Berry* inferior, of 2 cells, with several *seeds*.

SPEC. CHAR. Heads of flowers ovate, imbricated, terminal. Leaves all separate, deciduous. Flowers ringent.

SYN. *Lonicera Periclymenum.* *Linn. Sp. Pl.* 247. *Sm. Fl. Brit.* 260. *Huds.* 94. *Witb.* 246. *Hull.* 53. *Relb.* 93. *Sibth.* 81. *Abbot.* 49. *Curt. Lond. fasc.* 1. t. 15.

Caprifolium Germanicum. *Raii Syn.* 458.

THIS elegant plant which decorates our hedges so abundantly, and whose flowers perfume the air so delightfully in an evening or after rain, differs essentially from that in the last plate in having all the leaves distinct, not perfoliate, the flowers collected into an ovate head, not axillary, and the fruit crowned with a five-toothed calyx, instead of the nearly entire rim observable in the other. The berries are also rounder, of a darker red, and often roughish. The twining stem climbs to a considerable height upon trees and bushes. The leaves are entire, for the most part sessile, generally of a full green and smooth, paler beneath, often hairy, and in that case they are all over of a lighter hue. There sometimes occurs a remarkable variety with sinuated, generally variegated, leaves, called the Oak-leaved Honeyfuckle.

The Common Honeyfuckle is liable to many variations in the different degrees of smoothness or hairiness of its leaves, fruit and younger branches, as well as in the colour of its flowers, which are either externally of a deep red, or altogether of a pale yellowish hue; by the sea side they are often quite green. We have not however been able to find any specific distinction between these varieties. They all flower most plentifully in June and July, but occasionally throughout the autumn also.



Nov 1. 1866 Published by Jap. Sowerby London.

LONICERA Xylosteum.

Upright Honeysuckle.

PENTANDRIA Monogynia:

GEN. CHAR. Cor. of 1 petal, irregular. Berry inferior, with several seeds.

SPEC. CHAR. Stalks two-flowered. Berries distinct. Leaves entire, downy.

SYN. *Lonicera Xylosteum*. Linn. *Sp. Pl.* 248. Berk. *Outlin. ed.* 1. v. 2. 60. *With.* 247. *Sym. Syn.* 59. *Hull.* 53.

Periclymenum rectum germanicum. Ger. *em.* 1294.

BERKENHOUT, on the authority of Wallis's History of Northumberland, mentions this shrub as growing in the fissures of rocks under the Roman wall near Shewing-Sheels, a kind of situation in which it should seem to be truly wild: but its being frequent in gardens has made me consider it hitherto as a doubtful native, notwithstanding the opinion of Dr. Withering. I shall no longer dispute the point, having received the specimen here figured from Mr. W. Borrer junior, who found this plant "growing plentifully, and certainly wild, in a copse called the Hacketts, to the east of Houghton bridge, 4 miles from Arundell, Suffex." It flowers in July.

The stem is upright, bushy, very much branched. Branches opposite, round; those of the present year downy and leafy. Leaves opposite, on foot-stalks, ovate, rather pointed, entire, flexible, clothed on both sides with short soft hairs, deciduous. Flowers inodorous, in pairs, on solitary axillary stalks shorter than the leaves. Outer bractæ a pair of awl-shaped hairy spreading leaves; inner, a concave blunt hairy scale under each germen. Calyx in 5 obtuse lobes. Corolla yellowish white, often tinged with red, downy; the upper lip four-cleft, lower undivided. Stamina equal, downy, shorter than the corolla. Berries oval, red, separate, of one cell, juicy, containing 6 or more seeds.

910



Aug. 1. 1891. Published by J. E. Smith, London.

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RHAMNUS catharticus.

Buckthorn.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* tubular. *Petals* 5, opposite to the
stamina. *Berry* superior, with few seeds.

SPEC. CHAR. Spines terminal. Flowers four-cleft, di-
oecious. Leaves ovate. Stem upright. Seeds four.

SYN. *Rhamnus catharticus.* *Linn. Sp. Pl.* 279. *Sm.*
Fl. Brit. 261. *Huds.* 98. *With.* 256. *Hull.* 53.
Relh. 94. *Sibth.* 82. *Abbot.* 52. *Woodv. Med.*
Bot. t. 114. *Fl. Dan. t.* 850. *Raii Syn.* 466.

NOT rare in hedges and bushy places, flowering in May or
June, and ripening its berries about Michaelmas.

It forms a hard, rigid, spreading shrub, with alternate, or
often nearly opposite, branches, each tipped with a strong
thorn. First leaves in clusters from the flowering buds, but
those on the fresh branches are opposite; all grow on downy
footstalks, and are ovate, serrated, strongly veined, downy
when young, deciduous. Stipulæ linear, soon falling off.
Flowers on short, simple, clustered stalks, yellowish green.
Calyx-lobes, petals and stamina 4. Lobes of the stigma 4,
sometimes but 3, and the seeds agree with them in number.
In flowers with perfect stamina the petals are elliptical, and
the germen for the most part obsolete and abortive; in those
with a fertile germen the petals are linear, and the stamina
scarcely more than minute bristles. Sometimes, however, both
organs are perfect in the same flower. The berries are globu-
lar, black, nauseous, well known for their purgative quality,
which is not of the mildest or most salubrious kind. In an
unripe state they dye yellow, but are esteemed far inferior to
those of *R. infectarius* brought from the Levant.



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12

RHAMNUS Frangula.

*Berry-bearing Alder.**PENTANDRIA Monogynia.*

GEN. CHAR. *Cal.* tubular. *Petals* 5, opposite to the
stamina. *Berry* with few seeds.

SPEC. CHAR. Spines none. Flowers hermaphrodite.
Leaves smooth, entire. Seeds two.

SYN. Rhamnus Frangula. *Linn. Sp. Pl.* 280. *Huds.*
Fl. An. 98. *With. Bot. Arr.* 240. *Relb. Cant.* 96.
Frangula, seu Alnus nigra baccifera. *Raii Syn.* 465.

THIS shrub occurs in woods and thickets occasionally in various parts of England, whether in Scotland or not is doubtful. It flowers early in May. The berries are ripe in July.

The stem grows 3 or 4 feet high, with numerous forked branches. Leaves on the young ones only, opposite, obovate, pointed, entire, veiny, of a bright pleasant green. Flowers from the bosoms of the leaves, 2 or 3 together, on simple flower-stalks, greenish, small. Calyx cup-shaped, with 5 reflexed segments, between which stand the little petals, and opposite to them the very minute stamina, with dark purple antheræ. Germen superior, with a very short style. Berry dark purple, with 2 hemispherical seeds.

According to the Dispensatory these berries are sometimes mixed with those of Buckthorn (*Rhamnus catharticus*), or substituted for them, as are even those of the Cornel-tree figured on the last plate. In the latter instance the deception would probably be greater than in the former, for both these *Rhamni* are nearly alike purgative. The work just quoted adds very properly, that these fruits are easily distinguished, by the Buckthorn having 4 seeds, *R. Frangula* 2, and the *Cornus* but 1, or rather 1 nut enclosing 2 kernels.

EUONYMUS europæus.

*Spindle-tree.**PENTANDRIA Monogynia.*

GEN. CHAR. *Petals 5. Capsule with 5 angles, 5 cells, and 5 valves, coloured. Seeds in a pulpy covering.*

SPEC. CHAR. *Petals mostly 4, acute. Leaves on short footstalks. Branches smooth.*

SYN. *Euonymus europæus. Linn. Sp. Pl. 286. Huds. Fl. An. 98. With. Bot. Arr. 241. Relh. Cant. 96. Sibth. Ox. 82.*

E. vulgaris. Raii Syn. 468.

HEDGES and thickets in most parts of England produce this shrub not unfrequently, though it rarely occurs in mountainous countries. The flowers appear early in May; the fruit does not ripen till the autumn, when it continues to ornament the hedges, even after the leaves are fallen, and is frequently joined with holly and miseltoe to adorn houses and churches at Christmass.

This is a small shrub, with straight spreading branches, which are angular when young, having four slightly prominent lines running down them; but these are not always visible; their bark is green and smooth. Leaves nearly opposite, on short footstalks, lanceolate, pointed, serrated, the first pair only being entire. Stipulæ none. Flowers in small, axillary, forked, divaricated panicles, whitish and foetid; the first of them that opens having five stamina, and as many petals, calyx-teeth, and capsules; but all the rest have those parts in fours only. The style is short, simple, and acute. Capsules pink-coloured when ripe, bursting at their outer edges, and each cell containing one whitish seed, enveloped in an orange-coloured pulpy coat. This fruit is reported, even from the days of Theophrastus, to be violently emetic, purgative, and dangerous. That author asserts the leaves to be poisonous to cattle, especially goats, unless they be copiously purged. Dr. Withering says: Cows, goats, and sheep eat this plant. The wood, cut in summer-time, is tough, and used for skewers. Linnæus observes that it makes the best charcoal to draw with.



Opuntia aculeata (L.) Mill.

R I B E S rubrum.

*Common Currant.**PENTANDRIA Monogynia.*

GEN. CHAR. *Cal.* superior, bell-shaped, 5-cleft, bearing the *petals* and *stamina*. *Style* cloven. *Berry* with many seeds.

SPEC. CHAR. No thorns. Clusters smooth, pendulous. Flowers but little concave. Petals obtuse.

SYN. *Ribes rubrum*. *Linn. Sp. Pl.* 290. *Sm. Fl. Brit.* 263. *Huds.* 99. *With.* 264. *Hull.* 54. *Relh.* 96. *Sibth.* 84. *Lightf.* 146. *Woodv. Med. Bot. t.* 74.

R. vulgaris, fructu rubro. *Raii Syn.* 456.

A NATIVE of the mountainous parts of Durham and the north of Yorkshire, about the banks of rivers. Mr. Robson and Mr. W. Brunton have furnished us with wild specimens of the leaves and flowers, but the berries we could never obtain (except from gardens), the birds feeding on them before they are ripe.

The value of this shrub, when cultivated for its fruit, is sufficiently well known. The white and pale red are preferred for their sweetness, the full red, or wild kind, for its grateful acid. The Currant is quite the fruit of a cold climate, thriving very ill in the south of Europe. The flowers are out in May; the fruit ripens in July.

This is a bushy shrub, with smooth and unarmed branches. Leaves deciduous, on long footstalks, five-lobed, doubly-serated, most downy beneath. Clusters simple, at all times pendulous. Bractæ solitary, ovate, concave, small, smooth, very much shorter than the partial flower-stalks. Sometimes there are a pair of other small bractæ under each flower, but not so constant nor conspicuous as in *R. petraeum*, *t.* 705. Flowers cupshaped, nearly flat, yellowish green. Petals obtuse, or inversely heartshaped. Berries globular, smooth, red and shining.



After Dr. J. S. Sowerby, London

12



RIBES alpinum.
Tasteless Mountain Currants.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* superior, bell-shaped, 5-cleft, bearing the *petals* and *stamina*. *Style* cloven. *Berry* with many seeds.

SPEC. CHAR. No thorns. Clusters erect both in flower and fruit. *Bractææ* longer than the flowers. Leaves shining beneath.

SYN. *Ribes alpinum*. *Linn. Sp. Pl.* 291. *Sm. Fl. Brit.* 264. *Huds.* 99. *Willd.* 264. *Hull.* 54. *Dicks. H. Sicc. fasc.* 15. 13. *Lightf.* 146.

R. alpinus dulcis. *Raii Syn.* 456.

A NATIVE of rocky mountainous woods or thickets in some parts of the north of England and Scotland. We received a specimen in flower from Mr. E. Robson May 29 last, and another in fruit from Mr. W. Brunton, jun. of Ripon, June 20.

This cannot be confounded with any other British *Ribes*. The small leaves, so smooth and shining underneath, the constantly upright spikes, and the insipid fruit clearly ascertain it. The berries, so far from having the sharp acidity of our red currants, are filled with a mucilage as tasteless as gum arabic. The shrub is about 2 or 3 feet high, much branched, smooth, except that the leaf-stalks are ciliated. Flowers small, of a dull green, with glandular stalks, and brown membranous *bractææ* exceeding each flower in length. The bark in winter is covered with small black *Sphæria*, or other minute *Fungi*, which Mr. Sowerby proposes to illustrate hereafter in his admirable figures of that curious and intricate tribe.

It is well worth observing how truly the insertion of the *stamina* into the calyx, as in the class *Icosandria*, indicates a wholesome fruit. The fruits of the *Pentandria Monogynia* are generally dangerous, many of them peculiarly fatal. *Ribes* is an exception, indicated by the insertion of its *stamina*, in which, though not in their number, it accords with the *Icosandria*. With this simple guide a traveller in the most unknown wilderness might eat in safety, and thus the natural tree of knowledge leads to life.



RIBES spicatum.
Acid Mountain Currant.

PENTANDRIA Monogynia.

GEN. CHAR. *Cal.* superior, bell-shaped, 5-cleft, bearing the *petals* and *stamina*. *Style* cloven. *Berry* with many seeds.

SPEC. CHAR. No thorns. Spikes erect. Flowers nearly sessile. Petals oblong. Bractææ shorter than the flowers.

SYN. *Ribes spicatum.* Robson in *Tr. of Linn. Soc.* v. 3. 240. t. 21. *Sm. Fl. Brit.* 264. *With.* 265. *Hull.* 54. *Sym. Syn.* 62.

A MORE particular inquiry, since page 705 was written, has convinced me of the distinction between this plant and *R. petraeum*, which consists in the clusters being always erect, both in flower and fruit; and in the extreme shortness of the partial flower- and fruit-stalks. Hence the clusters are more properly denominated spikes. Mr. Robson, to whom we are obliged for wild specimens, is the only discoverer of this species. He found it near Richmond in Yorkshire, and between Piersbridge and Gainford in Durham, flowering in May; and his account, with a plate annexed, is published in the Linnean Society's 3d volume of Transactions.

Its leaves resemble *R. rubrum*, see last page, except in being generally more downy beneath, and more sharply serrated. The erect spikes, however, and nearly sessile flowers, are abundantly sufficient to distinguish it from that species. The flowers are of a dull brownish green. Petals oblong. Bractææ very small and recurved, about as long as the little partial stalks. No other bractææ are to be found. Berries red and acid, like the foregoing.

We should recommend this for cultivation, as there is no guessing what advantages a new species, or even variety, of Currant might possess.

1890



March 1 1890 Published by J. L. S. & Co. London.

R I B E S petræum.
Rock Currants.

P E N T A N D R I A Monogynia.

GEN. CHAR. *Cal.* superior, bell-shaped, 5-cleft, bearing the *petals* and *stamina*. *Style* cloven. *Berry* with many seeds.

SPEC. CHAR. No thorns. Clusters in flower erect ; in fruit pendent. Petals bluntish. Bractææ shorter than the flowers.

SYN. Ribes petræum. *Sm. Fl. Brit.* 265. *Wulfen. in Jacq. Misc. v. 2.* 36. *Jacq. Ic. Rur. v. 1. t. 49.* *Willden. Sp. Pl. v. 1.* 1153.

GATHERED in the mountainous country near Eggleston, Durham, and sent to us by the Rev. Mr. Harriman, F.L.S., as well as from Concliffe by Mr. E. Robson. It flowers in May or June, and ripens its berries a month or six weeks later.

This is a bushy branched shrub, with leaves not unlike those of *R. rubrum*, except that they are rather more downy in general on the under side, particularly about the veins. Clusters of flowers erect, but as the fruit ripens they become pendulous. Calyx greenish, often stained with red, and the petals, which vary in shape and breadth, but are generally blunt, are brownish or reddish. Berries globose, bright red, acid. The bractææ are short, roundish, very blunt, recurved, ciliated, not so long as even the stalk of the flower.

I have some doubt whether the *R. spicatum*, described by Mr. Robson in the Linn. Society's Transactions v. 3. t. 21, be really a distinct species from this. The chief difference seems to consist in the fruit being erect or pendulous. This point however cannot be left to a more faithful observer than himself to determine on the spot.

I find myself farther obliged to observe that the Abbé Wulfen's figure, published by Jacquin, has the flowers of much too high a rose-colour, from whence Lamarck has incautiously defined the species "*calyce ruberrimo*." This figure is still more faulty in having linear sharp long bractææ. Our specimens agree precisely with one sent by Prof. Jacquin himself, so there can be no fallacy in that respect. I make this remark merely for the sake of truth, and with the highest esteem for his venerable correspondent, whatever may have been said to the contrary by a german writer* of no authority, equally deficient in liberality and fidelity, whose name I scarcely know, and will not help to preserve.

* In a review of Tr. of Linn. Soc. v. 2. p. 10.



RIBES nigrum.

*Black Currant.**PENTANDRIA Monogynia.*

GEN. CHAR. *Cal.* superior, bell-shaped, 5-cleft, bearing the *petals* and *stamina*. *Style* cloven. *Berry*, with many seeds.

SPEC. CHAR. No thorns. Clusters hairy, pendulous, with a simple flower-stalk at their base. Flowers oblong.

SYN. *Ribes nigrum*. *Linn. Sp. Pl.* 291. *Sm. Fl. Brit.* 265. *Huds.* 99. *With.* 265. *Hull.* 54. *Lightf.* 146. *Relh.* 96. *Abbot.* 53. *Woodv. Med. Bot. t.* 75. *Fl. Dan. t.* 556.

R. nigrum vulgò dictum, folio olente. Raii Syn. 456.

BLACK CURRANTS, scarcely less commonly, though less copiously, cultivated than the red or white, are most decidedly wild in many parts of Britain. They naturally grow in swamps, and about the banks of rivers. In unfrequented marshy spots about the Norwich river we have several times met with them, or at least with the shrub, for the fruit is speedily devoured by birds. Our specimen of the flowers was sent by Mr. Robson. The fruit came from a garden.

This species flowers in May, like the others, and ripens its berries in July. It is easily known by its more humble growth, and softer, somewhat larger, leaves, remarkable for their strong smell, approaching the scent of Savine, *Juniperus Sabina*. Many persons are fond of this smell, of which flavour the fruit so much partakes, as to be, to some people, disagreeable. In a preserved state it is highly grateful, and generally approved, being a popular and efficacious remedy for sore throats, or any irritation about the mouth. The odoriferous matter exudes from glandular hairs, scattered over the leaves and flower-stalks. The calyx is more tubular than in the species we have already described; the fruit larger, and black. Each cluster is remarkable for having a solitary simple flower-stalk at its base.

Dr. Withering has observed a very curious change of the petals of this plant into stamina.



April 1. 1866. Published by J. S. Edwards London.

RIBES Grossularia.

*Rough Gooseberry.**PENTANDRIA Monogynia.*

GEN. CHAR. *Cal.* superior, bell-shaped, 5-cleft, bearing the *petals* and *stamina*. *Style* cloven. *Berry* with many seeds.

SPEC. CHAR. Branches prickly. Footstalks hairy. Flower-stalks single-flowered. Bractææ distinct. Fruit hairy.

SYN. Ribes Grossularia. *Linn. Sp. Pl.* 291. *Sm. Fl. Brit.* 266. *With.* 266. *Hull.* 54. *Sym. Syn.* 62.

NOTHING can be more difficult than to say whether this plant be truly an original native of Britain. It is however so far naturalized as to be common in hedges and waste ground, and on old buildings. Mr. Robson finds it plentifully in woods and hedges about Darlington, which may be its native country. It flowers in April, and ripens its fruit in July.

It forms a low bushy shrub, whose branches are armed with one, two, or three strong spreading prickles under each bud. Leaves smaller, rounder, and more smooth and shining than in the currant, each three-lobed and cut, standing on hairy footstalks, various in length. Flower-stalks simple, drooping, bearing one flower, and a pair of separate, opposite, ovate, fringed bractææ a little below it. Germen downy. Calyx tubular. Petals elliptical or ovate, brownish or pale green. Berry rather elliptical, hairy, generally green or yellowish. In a garden, as every body knows, it is liable to many variations of colour, size and flavour. It is one of the most wholesome of fruits, which the inhabitants of tropical countries would gladly purchase with some of their more luscious productions. It is observable of the cultivated varieties, that what is gained in size is lost in flavour.

The Smooth Gooseberry, *R. Uva crispa*, is as frequent as the above, and perhaps only a variety of it.



R I B E S Uva-crispa.

*Smooth Gooseberry.**PENTANDRIA Monogynia.*

GEN. CHAR. *Cal.* superior, bell-shaped, 5-cleft, bearing the *petals* and *stamens*. *Style* cloven. *Berry* with many seeds.

SPEC. CHAR. Branches prickly. Footstalks hairy. Flower-stalks single-flowered. Bracteas united. Fruit smooth.

SYN. *Ribes Uva-crispa*. *Linn. Sp. Pl.* 292. *Sm. Fl. Brit.* 266. *With.* 266. *Hull.* 54. *Relh.* 97. *Sibth.* 84. *Cullum.* 88. *Schmidel. Ic.* 5. t. 1.

Uva crispa. *Fuchs. Hist.* 187. *Ger. em.* 1324.

AS we have been led, by great authorities, into an error, though not without repeatedly offering our protest against it, we deem it right to show what is meant by the plant in question, which indeed is necessary to the plan of this work. At the same time we demonstrate that some of the reputed characters, by which this has been supposed distinct from *R. Grossularia*, t. 1292, the glandular footstalks and united bracteas, are evanescent and futile, as Mr. Robson, by sowing the seeds, has proved the roughness or smoothness of the fruit to be. The germen indeed is hairy in the present plant, sent by Mr. W. Borrer from Sussex, though the fruit is smooth. The bracteas are scarcely at all united at the base, but this is a very variable circumstance. The footstalks of all wild gooseberry-bushes are generally hairy, but in some the hairs are more glandular than in others, as they likewise are on the germen of the Rough Gooseberry, while in that before us they are simple soft pointed hairs.



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Fig. 1. 1804. Polyth. fr. 1. - 1804. 2. 1804.

ILLECEBRUM verticillatum.

Whorled Knotgrafs.

*PENTANDRIA Monogynia.***GEN. CHAR.** *Cal.* of 5 leaves, cartilaginous, inferior.*Cor.* none. *Capsule* of 5 valves with 1 cell. *Seed* 1.**SPEC. CHAR.** Flowers whorled, without bractææ.
Stems procumbent.**SYN.** *Illecebrum verticillatum.* *Linn. Sp. Pl.* 298.*Sm. Fl. Brit.* 268. *Huds.* 100. *Witb.* 267.*Hull.* 54. *Dicks. Dr. Pl.* 57. *H. Sicc. fasc.* 12. 13.*Corrigiola. Raii Syn.* 160.

NO part of Britain except Cornwall and Devonshire has been hitherto known to produce this plant. It grows in moist boggy places, flowering in July, and was gathered by Mr. D. Turner and Mr. Sowerby in their western excursion two years since.

Root creeping and perennial. Herb smooth. Stems procumbent, a little branched, clothed with numerous pairs of opposite, nearly sessile, ovate, entire, rather fleshy leaves, which are accompanied above their insertion by membranous lacerated stipulæ. Tufts of flowers forming a small whorl grow out of the *axillæ* of almost every pair of leaves. The calyx consists of 5 white oblong leaves, thick and fleshy, hollowed out on the inside, and each tipped with a curved bristle. The stamina are shorter than the calyx, and stand on a kind of ring, with 5 reddish awl-shaped rays, ranged alternately with them on the same basis, which look like petals; but their insertion, and the analogy of other plants in this Natural Order, rather indicate them to be of the nature of barren filaments. We know not whether they are found in every species of *Illecebrum*. The germen is ovate, style very short, stigma red, with 5 small notches. Capsule of one cell, but formed of 5 valves, the most certain mark of the genus. Seed solitary, elliptical, tapering, round, not compressed.



Asperula cynanchica L.

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GLAUX *maritima*.*Black Salt-wort.**PENTANDRIA Monogynia.*

GEN. CHAR. *Cal.* one-leaved, campanulate. *Cor.* none.
Capsule superior, one-celled, five-valved, and five-seeded.

SPEC. CHAR. Only one species known.

SYN. *Glaux maritima.* *Linn. Sp. Pl.* 301. *Huds. Fl. An.* 101. *With. Bot. Arr.* 246. *Raii Syn.* 285.

NOTHING can be more common than this pretty little plant in salt marshes. It enlivens large tracts of the dreary and wretched situations where it is found, with its purplish flesh-coloured or whitish flowers, which are produced in great abundance in the summer, standing solitary, and with scarcely any foot-stalks, in the bosoms of the leaves.

The root is perennial and creeping.

The whole plant is succulent and salt to the taste. Dr. Withering remarks that cows eat it.



Salvia lyallii Greene 1891

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THESIIUM linophyllum.

*Bastard Toad-flax.**PENTANDRIA Monogynia.*

GEN. CHAR. *Cor.* none. *Cal.* of one leaf, bearing the stamina. *Seed* one.

SPEC. CHAR. Spike branched. Bractææ ternate. Leaves linear-lanceolate. Tube of the calyx very short.

SYN. Thesium Linophyllum. *Linæ. Sp. Pl.* 301.

Huds. Fl. An. 101. *Witb. Bot. Arr.* 247. *Relb.*

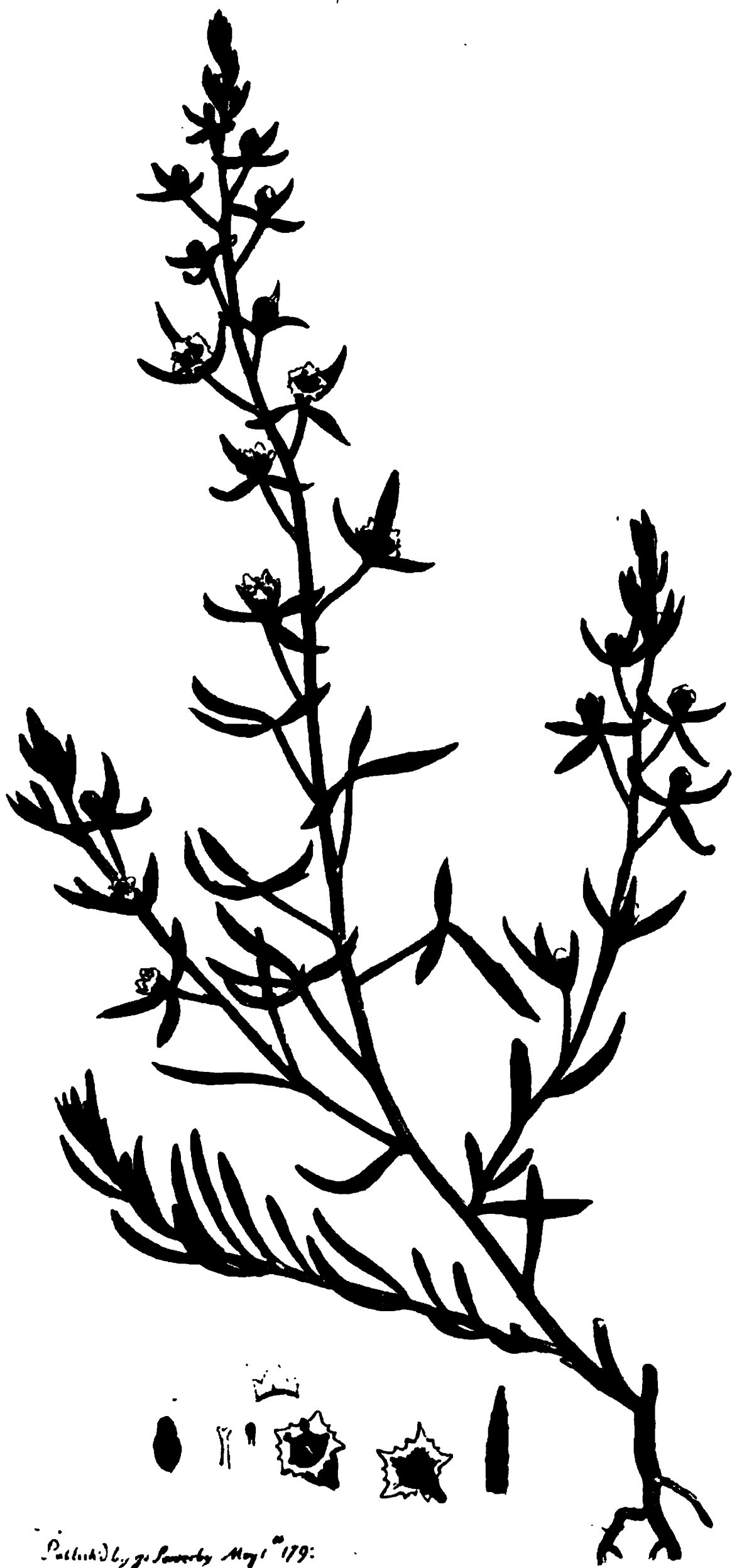
Cant. 99. *tab.* *Sibth. Oxon.* 414.

Linaria adulterina. *Raii Syn.* 202.

WE have received this plant from Sir Thomas Cullum, and the Rev. Mr. Hemsted, gathered near Bury and Newmarket, and also from the Lime-kiln hill, near Shouldham in Norfolk, where (for the first time, to our knowledge, in that county) it was found by the Rev. Mr. Forby. It grows on a chalk soil, flowering in July.

Root woody, branched, crooked, whitish, perennial. Stems several, reclining, 5 or 6 inches high, but little branched, angular and striated, clothed with numerous alternate linear leaves, all pointing one way, somewhat glaucous and succulent, entire. The whole herb is destitute of pubescence, but the edges of the leaves, bractææ, and angles of the stem appear rough under a microscope. Flowers in spikes (mostly branched, and sometimes so compound as to form a panicle), solitary, on alternate flower-stalks, with 3 bractææ close to each flower shaped like the leaves, but in the lower part of the spike one is much larger than the other two. Calyx funnel-shaped, the tube very short and open, margin spreading, 5-lobed; lobes triangular, with a tooth on each side near the base, very white above, and at the margin beneath. Stamina 5, opposite to the calyx-lobes. Style erect, equal to the stamina. Stigma with 2 knobs. Seed oval, 5-angled, striated, hard, invested with the permanent calyx. The herb is scarcely bitter, a little saltish.

This without doubt is *T. Linophyllum*; but when cultivated, as Linnæus had it, the whole herb becomes luxuriant, the spike paniced and leafy, according to his definition. *T. alpinum* differs from this in having a long tubular calyx; otherwise they are much alike. The intermediate kind, mentioned in Withering, we believe to be the proper wild appearance of *Linophyllum*.



Pellaea bl., ex Savatieri May 179:

1



[917]

VINCA minor.

Lesser Periwinkle.

PENTANDRIA Monogynia.

GEN. CHAR. Cor. twisted, salver-shaped. Pouches 2, erect. Seeds without beard or wing.

SPEC. CHAR. Stems procumbent. Leaves elliptic-lanceolate, smooth at the edge. Flowers on stalks. Calyx-teeth lanceolate.

SYN. Vinca minor. Linn. Sp. Pl. 304. Sm. Fl. Brit. 270. Huds. 91. With. 268. Hull. 51. Relb. 89. Sibth. 79. Abbot. 53. Curt. Lond. fasc. 3. t. 16.

V. pervinca minor. Rati Syn. 268.

WE have never seen the Lesser Periwinkle (far rarer than the Greater, t. 514) more truly wild than about Honingham church, 6 miles west of Norwich. Our specimen was gathered near Rippon, Yorkshire, by the Rev. Mr. Dalton, and sent by Mr. W. Brunton, being in the opinion of those gentlemen perfectly wild there. It is very generally cultivated in shady places under trees, its evergreen leaves and early flowers conducing greatly to the ornament of such places. The wild plant blossoms earlier than *V. major*; and the garden varieties, one of which is double and reddish, and another white with variegated leaves, are found in bloom even in March or April.

The root is perennial and creeping. Whole plant smooth and shining. Stems round, slender, leafy; erect when in flower, afterwards prostrate, elongated, taking root at their joints. Leaves opposite, on short stalks, lanceolate inclining to elliptic, entire, of a full shining green, destitute of the fringed edge observable in *V. major*. The flowers are also smaller than in that species, of a rather darker blue, with a much shorter, smooth, and less tapering calyx. The fruit of this species we have never seen.

417



417's 1791 Published by J. G. Smith London



v

1

V I N C A major.

*Greater Periwinkle.**PENTANDRIA Monogynia.*

GEN. CHAR. *Corolla* twisted, salver-shaped. *Pouches* 2, erect. *Seeds* without beard or wing.

SPEC. CHAR. Stems erect. Leaves ovate, finely fringed. Flowers on stalks.

SYN. *Vinca major*. *Linn. Sp. Pl.* 304. *Huds.* 91. *With.* 269. *Relb.* 89. *Sibth.* 79. *Curt. Lond. fasc.* 4. t. 19.

Clematis daphnoides major. *Raii Syn.* 268.

IN hedges and groves not very unfrequent in a truly wild state; though it is so generally cultivated in every ornamented shrubbery, and grows so readily, that we cannot always depend upon its being really of native growth. It flowers in May, and is one of the greatest ornaments of that favourite season.

The roots are perennial, creeping; the stems also, which are roundish and leafy, some of them trail and throw out roots, others grow erect and bear flowers, but even these afterwards take root from near their extremities. Leaves opposite, on footstalks, ovate, entire, finely fringed on their edges with short rigid hairs, otherwise smooth and shining. Flowers solitary, axillary, alternate, on stalks about half the length of the leaves. Calyx in five awl-shaped fringed segments, as long as the tube of the flower. Corolla of a fine purplish blue, salver-shaped, twisted (as in all this natural order of *Contorta*); its tube inflated, and five-sided in the upper part. Stamina inserted about its middle, bowed, ciliated and compressed. Antheræ hooded. Germen double, with 2 glands at its base. Style simple. Stigma shaped like a pulley, orange-coloured, its top five-lobed and downy. The fruit, which Mr. Curtis has not even mentioned, and which few botanists have seen, is produced every year in Mr. Kett's grounds at Seething, Norfolk, and consists of two awl-shaped, smooth, shining pouches, or *folliculi*, each containing one or two oblong seeds, with a groove down their upper side. These seeds are roughish, but naked, or destitute of beard, down, or wing.



Myrica carolinensis



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2

H E R N I A R I A glabra,
Smooth Rupture-Wort.

P E N T A N D R I A Digynia:

GEN. CHAR. *Cal.* in 5 segments. *Cor.* none. Five
 barren *stamina*. *Capsule* with one *seed*.

SPEC. CHAR. Herbaceous and smooth,

SYN. *Herniaria glabra.* *Linn. Sp. Pl.* 317. *Huds. Fl.*
An. 108. *With. Bot. Arr.* 250.

Herniaria. *Raii Syn.* 160.

THIS was found in Ray's time in gravelly soil about the Lizard point, Cornwall, where it still grows abundantly. The Rev. Mr. Hemsted gathered this wild specimen near Newmarket.

Root taper, annual. Stems several, various in length, spreading flat on the ground in the form of a star, alternately branched, round, sometimes minutely pubescent. Leaves opposite about the lower part of the stem, one often smaller than the other, elliptical, entire, smooth. Stipulæ membranous. Flowers in leafy clustered racemi, opposite to the solitary leaves, small, green, short-lived, very numerous. The calyx is closed after flowering, and embraces the ripening capsule. It flowers about July and August.

Whence this plant obtained its absurd name, and credit for curing ruptures, is hardly worth enquiring.

The variety β of Mr. Hudson is manifestly (from Plukenet's figure copied by Petiver) nothing but *Glaux maritima*. What *H. lenticulata* of Linnæus may be, it is not our purpose now to determine, but there is much reason to suppose it *Cressa cretica*.



7. Juncus del. Oct. 1. 1904

[1379]

HERNIARIA hirsuta.

Hairy Rupture-wort.

PENTANDRIA Digynia.

GEN. CHAR. *Cal.* in 5 segments, inferior. *Cor.* none.
Stamina with 5 thread-shaped scales between them.
Caps. with 1 seed, covered with the calyx.

SPEC. CHAR. Herbaceous and hairy.

SYN. *Herniaria hirsuta.* *Linn. Sp. Pl.* 317. *Sm. Fl. Brit.* 272. *Huds.* 109. *With.* 270. *Hull.* 57.
Dill. in Raii Syn. 161.

HUDSON mentions Colney-Hatch near Barnet as the place of growth of this *Herniaria*. We have no authority to confirm or to contradict his assertion; but we are certain that the plant is wild in Cornwall, from whence we have received specimens. It is in general of rare occurrence, and is probably, according to the opinion of Mr. Stackhouse, who has studied it in its native soil, merely a variety of *H. glabra*, v. 3. t. 206. We are also obliged to that gentleman for the information of both plants being perennial, not annual. They grow in a sandy soil, flowering copiously in July and August.

We can discover no difference between the two, except the present being clothed all over the stem, calyx, bractæ, and one or both sides of the leaves, with short rigid minute bristles or hairs, with which also the leaves are strongly fringed. We have a Swiss specimen of *H. glabra* which has acquired this pubescence, of a minute size, on its stem only, but which evidently betrays an approach to the more hairy plant now before us.





CHENOPODIUM Bonus Henricus.

*Perennial Goosefoot.**PENTANDRIA Digynia.*

GNE. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. *Seed* 1, lenticular, invested with the closed five-sided calyx.

SPEC. CHAR. Leaves triangular-arrowshaped, entire. Spikes compound, leafless.

SYN. *Chenopodium Bonus Henricus.* *Linn. Sp. Pl.* 318. *Sm. Fl. Brit.* 272. *Huds.* 104. *Witb.* 270. *Hull.* 56. *Relb.* 102. *Sibth.* 87. *Abbot.* 54. *Curt. Lond. fasc.* 3. t. 17.

Blitum perenne, Bonus Henricus dictum. *Raii Syn.* 156.

PERENNIAL, flowering from May to the end of summer, by which it is distinguished from other British plants of its genus, which are all annuals, flowering for the most part late in the autumn. *Perenne* would surely have been a much better specific name than the old *Bonus Henricus*, for the retaining which we can offer no other excuse than its extreme foolishness, which renders it impossible to be ever forgotten.

This plant frequently occurs in waste ground about villages, farm-yards and cottages. Its root is fleshy and branched. Stems spreading from the base, then erect, a foot high, branched below, leafy, striated. Leaves alternate, on stalks, gradually smaller upwards, triangular-hastate, or somewhat arrow-shaped, acute, entire, clothed with unctuous mealiness, especially beneath. Spikes numerous, axillary and terminal, erect, dense, compound, destitute of the small leaves which in some species grow among their lobes. Flowers mealy, green, some of them frequently wanting the stamina. Calyx bordered with an abrupt membrane. Styles often 3. Seed kidney-shaped.

The young herb boiled is a good substitute for Spinach, and is in some places cultivated for the table.



✓

(717)

CHENOPODIUM urbicum.

*Upright Goosefoot.**PENTANDRIA Digynia.*

GEN. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. *Seed* 1, lenticular, invested with the closed five-sided calyx.

SPEC. CHAR. Leaves triangular, toothed. Clusters dense, very straight, long, approaching the stem, and almost leafless.

SYN. *Chenopodium urbicum.* *Linn. Sp. Pl.* 318. *Sm. Fl. Brit.* 273. *Huds.* 104. *Witb.* 270. *Hull.* 56. *Sibth.* 87. *Abbot.* 54.

C. erectum, foliis triangularibus dentatis, spicis e foliorum alis plurimis longis erectis tenuibus. *Dill. in Raii Syn.* 155.

THIS is one of the most difficult to ascertain of all our British species of *Chenopodium*, and I confess myself entirely obliged to Mr. Curtis in his *Fl. Lond. fasc.* 6. t. 21, for a decisive mark to distinguish it from the *rubrum*, which consists in the ripe seeds of the latter being no larger than grains of writing sand, whereas those of the plant now before us are at least five times that size, or about as big as Rape seed. In the red or green colour of the stem and flowers both plants vary. *C. urbicum* however has the leaves in general more truly triangular, less lengthened out at the base, and not so deeply sinuated as the other; clusters more straight and erect, at length close-pressed to the stem, and almost destitute of the little leaves so copiously interspersed among the flowers of *C. rubrum*. The flowers in both are occasionally polygamous; but the calyx being universally regular, five-cleft, and not much enlarged after flowering, clearly separates *Chenopodium* from *Atriplex*.

C. urbicum is common in St. George's fields, flowering in August and September. It is annual, and thrives on dunghills and waste places about towns or villages. We have specimens from Norfolk, Oxfordshire, and Bedfordshire.



[1721]

CHENOPODIUM rubrum.*Red Goosefoot.**PENTANDRIA Digynia.*

GEN. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. *Seed* 1, lenticular, invested with the closed five-sided calyx.

SPEC. CHAR. Leaves triangular approaching to rhomboid, deeply toothed and somewhat sinuated. Clusters upright, compound, leafy.

SYN. *Chenopodium rubrum.* *Lin. Sp. Pl.* 318. *Sm. Fl. Brit.* 274. *Huds.* 105. *With.* 271. *Hull.* 56. *Relk.* 100. *Sibth.* 88. *Abbot.* 54. *Curt. Lond. fasc.* 6. t. 21.

Blitum Pes anserinus dictum. *Raii Syn.* 154.

COMMON in waste ground among rubbish, especially in situations that are low and muddy, and in a rich soil, flowering from August to October.

Root annual. Herb smooth, varying much in luxuriance, as well as in colour, being often tinged with red, and in exposed situations very much so. When bruised it has a faint foetid odour. Stem generally erect, from 1 to 3 feet high, branched, somewhat pyramidal, leafy, round, furrowed. Leaves alternate, on stalks, triangular but lengthened out at the base so as to be almost rhomboid, deeply toothed and more or less sinuated, scarcely shining. Clusters of flowers axillary, rather spreading, compound, interspersed with numerous little leaves, often red. Calyx mostly smooth. Seeds blackish, shining, smooth, smaller than in most others of the genus, being about the size of common sand, whereas those of *C. arbicum* are, as Mr. Curtis observed, much larger. Ray mentions a plant resembling this, *Syn.* 154. n. 4, whose seeds he says are extremely minute; which induces us to consider it as a variety of what is here described.



CHENOPODIUM botryodes.*Many-clustered Goosefoot.*

PENTANDRIA Digynia.

GEN. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. *Seed* 1, lenticular, invested with the closed five-sided calyx.

SPEC. CHAR. Leaves triangular, somewhat toothed; the upper ones bluntish. Clusters upright, compound, rounded, leafy.

WE are obliged to the accurate Mr. Wigg for pointing out this plant to us, in waste ground where the soil is moist and sandy, near Yarmouth, and we have gathered the same between the cliff and the sea at Lowestoft, flowering in autumn.

The root is annual. Herb most akin to *C. rubrum*, *t.* 1721, but the leaves are very much smaller, and not rhomboid, or very slightly so, neither are they so much toothed; the upper ones are most blunt, their edges somewhat revolute or reflexed; all of a fleshy texture, smooth, frequently red. The clusters of flowers and seed are peculiarly abundant and rounded, often red, growing on upright leafy branches. Calyx tumid and blunt. Seed small, black and shining.

The *Blito Pes anserinus dicto similis*, Raii Syn. 154, n. 4, being found in Oxfordshire, can scarcely agree with this, which is a maritime species, and we would rather let that remain as a variety of *C. rubrum*, at least till an authentic specimen comes in our way.



Fig. 1. Knotweed of the Knotweed, London

[1722]

CHENOPODIUM murale.*Nettle-leaved Goosefoot.*

PENTANDRIA Digynia.

GEN. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. Seed 1, lenticular, invested with the closed five-sided calyx.

SPEC. CHAR. Leaves ovate, acute, toothed, shining. Clusters very much branched, cymose, leafless.

SYN. *Chenopodium murale.* *Linn. Sp. Pl.* 318. *Sm. Fl. Brit.* 274. *Huds.* 105. *With.* 272. *Hull.* 56. *Relh.* 100. *Sibth.* 88. *Abbot.* 54. *Curt. Lond. fasc.* 6. t. 20.

Blitum Pes anserinus dictum, acutiore folio. *Raii Syn.* 154.

VERY abundant on banks and under walls about towns and villages in the autumn, flowering in August and September, and ripening abundance of seed in the following months. The whole plant is foetid, known by its branched spreading stem, its dark shining leaves, which are ovate and sharply toothed, but especially by its cymose and very compound clusters or panicles, destitute of small leaves, springing from the stem a little above the insertion of each footstalk, being therefore not truly axillary. The clusters are most crowded about the summit of the stem, and one of them is terminal. The root is annual. Calyx more or less frosted or glandular. Seed larger than in *C. rubrum*, black, very minutely dotted. The stem is often tinged with dark purple rather than red.

The seeds of the various species of *Chenopodium* afford a large supply of food to small birds.



Min. Natur. Tab. 1722 by J. J. Sowerby, London.

✓

[1919]

CHENOPODIUM hybridum.*Maple-leaved Goosefoot.*

PENTANDRIA Digynia.

GEN. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. *Seed* 1, lenticular, invested with the closed five-sided calyx.

SPEC. CHAR. Leaves heartshaped, pointed, with broad angular teeth. Clusters very much branched, somewhat cymose, divaricated, leafless.

SYN. *Chenopodium hybridum.* *Linn. Sp. Pl.* 319. *Sm. Fl. Brit.* 275. *Huds.* 105. *With.* 272. *Hull.* 56. *Relh.* 100. *Sibth.* 89. *Abbot.* 55. *Curt. Lond. fasc.* 4. *t.* 23.

C. stramonii folio. *Dill. in Raii Syn.* 154.

THIS is perhaps the most uncommon of its genus in Britain. It grows in moist, fertile spots, as about Battersea. We have seen it near Ipswich and Colchester. It is an annual of rank growth, a branching spreading smooth habit, and foetid scent, flowering in August.

The stems are more slender than in most other species, the leaves larger, of a full bright green, heartshaped, or at least not lengthened out at the base, pointed, with about 3 large angle-like teeth on each side. Clusters axillary, almost entirely destitute of small leaves, slender, spreading, much branched in a cymose form. Seeds, when stripped of their pellicle, black, marked with irregular, large wrinkles or dots.

1919



Rep. 1. 1888. Published by J. F. Jewell, London.

[1723]

CHENOPODIUM album.

*White Goosefoot.**PENTANDRIA Digynia.*

GEN. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. *Seed* 1, lenticular, invested with the closed five-sided calyx.

SPEC. CHAR. Leaves ovate, inclining to rhomboid, jagged, entire towards the base; upper ones oblong and perfectly entire. Seeds smooth.

SYN. *Chenopodium album.* *Linn. Sp. Pl.* 319. *Sm. Fl. Brit.* 275. *Huds.* 106. *With.* 271. *Hull.* 56. *Relh.* 101. *Sibth.* 88. *Abbot.* 55. *Curt. Lond. fasc.* 2. *t.* 15.

Blitum Atriplex sylvestris dictum. *Raii Syn.* 154.

β. *Chenopodium viride.* *Linn. Sp. Pl.* 319. *With.* 272. *Hull.* 56.

C. album β. *Huds.* 106.

γ. *C. foliis integris racemosum.* *Dill. in Raii Syn.* 155.

THE most common of its genus in all kinds of cultivated ground, as well as about dunghills and waste places, flowering throughout the summer and autumn. It is known by its peculiar hoary or silvery aspect, which is caused, not by any hair or down, but by a mealiness, greasy to the touch, and becoming at length dry and chaffy.

Root annual. Stem branched, angular, rarely reddish. Leaves on longish stalks; the principal ones ovate inclining to deltoid, coarsely toothed, entire towards the base: the upper ones, about the flowering portion of the stem, more or less oblong, and perfectly entire. Bunches of flowers oblong, blunt, erect, compound, accompanied by small leaves, but those leaves are not intermixed with the flowers. Calyx frosted. Seeds brown, very smooth, not dotted.

Dillenius in Ray's *Synopsis*, 155, 156. *n.* 10 and 13, mentions what seem to us trivial varieties of this plant, which is a very variable species. Its most remarkable and frequent variety is *C. viride* of Linnæus, known by its greener hue, narrower and more entire leaves (sometimes quite entire), and more elongated clusters of flowers.

C. album is generally esteemed an useless weed, though cattle will feed upon it. We believe it is eatable when boiled, like *C. Bonus Henricus*.

7723



Sp. 1817. Published by J. S. Smith, London.

[1724]

CHENOPODIUM ficifolium.

*Fig-leaved Goosefoot.**PENTANDRIA Digynia.*

GEN. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. *Seed* 1, lenticular, invested with the closed five-sided calyx.

SPEC. CHAR. Leaves sinuated, somewhat hastate, jagged, entire towards the base; upper ones oblong and perfectly entire. Seeds dotted.

SYN. *Chenopodium ficifolium.* *Sm. Fl. Brit.* 276. *Relh.* 101.

C. viride. *Curt. Lond. fasc.* 2. t. 16.

C. serotinum. *Huds.* 106. *Sibth.* 88. *Abbot.* 55.

Blitum fictis folio. *Dill. in Raii Syn.* 155.

FOUND, like others of its genus, about dunghills and waste places, but much more rarely than the generality of them. It occurs in several spots near London. Our specimen was sent by Mr. Turner from Yarmouth.

This species is annual, flowering in August. Mr. Curtis first clearly ascertained its specific difference from *C. album* in the seeds being dotted or reticulated, which difference is confirmed by its much greener hue, the purple stain at the base of the foot-stalks, and the hastate, or fig-like, form of the leaves, their lobes being more round-pointed, and the middle one more elongated, than in *C. album*. Mr. Curtis erred only in taking it for the *viride* of Linnæus, which is a variety of *album* t. 1723; whereas Hudson mistook it for the *serotinum* of the same author, a species not yet found in Britain. The plant before us, allied to *C. album* on the one hand, approaches on the other to *C. glaucum* in some respects, and is a sort of intermediate species, though very distinct from both.



CHENOPODIUM glaucum.

Oak-leaved Goosefoot.

PENTANDRIA Digynia.

GEN. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. *Seed* 1, lenticular, invested with the closed five-sided calyx.

SPEC. CHAR. Leaves all oblong, with a deeply-waved edge; glaucous beneath. Clusters compound and dense, without leaves.

SYN. *Chenopodium glaucum.* *Linæ. Sp. Pl.* 320. *Sm. Fl. Brit.* 277. *Huds.* 106. *With.* 272. *Hull.* 56.

C. angustifolium laciniatum minus. *Dill. in Raii Syn.* 155.

FOUND on sandy or gravelly ground in several parts of the neighbourhood of London, but not in many other places in England. It is annual, flowering in August, and varies greatly in size, from 2 inches to almost 2 feet, according to the moisture of the soil. In rich ground it grows extremely rank, losing its delicacy of colour, and much of those contrasted hues of green, red, and glaucous white, which in a poor soil render it more elegant in appearance than most of its family.

The stems are thickish, branched and spreading, often prostrate. Leaves alternate, stalked, oblong, uniform, bluntish, waved, almost sinuated; green and smooth above; mealy and white beneath. Clusters terminal and axillary, short, compound, dense, with a small leaf or two at their base, but none interspersed between their lobes. Calyx-lobes obtuse, smooth and entire. Seed blackish, very minutely dotted.



CHENOPODIUM olidum.

*Stinking Goosefoot.**PENTANDRIA Digynia.*

GEN. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. *Seed* 1, lenticular, invested with the closed five-sided calyx.

SPEC. CHAR. Leaves ovate, somewhat rhomboid, entire. Flowers in dense clustered spikes.

SYN. *Chenopodium olidum.* *Curt. Lond. fasc. 5. t. 20. Sm. Fl. Brit. 277. With. 273.*

C. Vulvaria. *Linn. Sp. Pl. 321. Hudf. 107. Hall. 56. Relb. 105. Sibth. 89. Woodv. Med. Bot. t. 145.*

Blitum foetidum, Vulvaria dictum. Raii Syn. 156.

GATHERED in St. George's fields, where, as well as in other waste places about London, it frequently occurs. In general it is most plentiful near the sea-coast among sand or rubbish, and flowers in August.

Root annual, small. Stems many, spreading or prostrate, branched, leafy. Leaves alternate, on footstalks, spreading, smaller than in most of the same genus, of a squareish ovate figure, entire. Clusters interrupted, axillary and terminal, short and dense. Seed depressed, dotted.

The whole plant is of a dull glaucous or greyish green, invested with a grainy meakiness, which when touched exhales a most odious and lasting smell, like that of stale salt-fish, which Lobel tells us is peculiarly attractive to dogs.



1034



Portulaca oleraceae L.

CHENOPODIUM polyspermum.*Round-leaved Goosefoot.*

PENTANDRIA Digynia.

GEN. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. *Seed* 1, lenticular, invested with the closed five-sided calyx.

SPEC. CHAR. Leaves ovate, obtuse, entire. Stem prostrate. Clusters cymose, divaricated, leafless.

SYN. *Chenopodium polyspermum.* *Linn. Sp. Pl.* 321. *Sm. Fl. Brit.* 278. *Huds.* 107.

C. Betæ folio. *Raii Syn.* 157.

Allseed Blite. *Pet. H. Brit. t. 7. f. 10.*

OUR specimens of this *Chenopodium* were gathered on waste ground in Cornwall in the latter part of summer. It is certainly what Linnæus intended by the above denomination, as his definition and specimen prove; but another plant has been confounded with this, which we have now for the first time distinguished from it, see *t.* 1481.

The root of *C. polyspermum* is annual and branched. Stems all prostrate and widely spreading, mostly simple, roundish, striated, leafy from the base to the extremity. Leaves alternate, on footstalks, ovate or roundish, generally very obtuse, quite entire and undivided, though sometimes a little waved or irregular in their outline; their colour is a deep grass green. Clusters of flowers very large, axillary, sessile, cymose, spreading, repeatedly subdivided, without any small leaves at their divarications. Flowers green. Seed black, kidney-shaped, minutely dotted. Our figure shows it magnified, as well as a flower.



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CHENOPODIUM acutifolium.

Sharp Entire-leaved Goosefoot.

PENTANDRIA Digynia.

GEN. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. *Seed* 1, lenticular, invested with the closed five-sided calyx.

SPEC. CHAR. Leaves ovate, acute, entire. Stem erect. Clusters somewhat cymose, elongated, leafless.

SYN. *Chenopodium polyspermum*. *Curt. Lond. fasc. 2. t. 17. With. 273. Hull. 57. Relh. 102. Sibth. 89.*
Atriplex sylvestris, sive Polyspermon. Ger. em. 325.

THIS is what Mr. Curtis, in general so intelligent and correct with regard to the species of this difficult genus, has published as *C. polyspermum*; but finding the Linnæan specific character did not well apply to it, and yet never dreaming of there being more than one species in question, he very properly gave it a character of his own. This plant occurs in fields and waste ground about Battersea, Lambeth, and, as it should seem, many other parts of England. It is annual, and flowers in July and August.

The stem is nearly upright, much-branched throughout, leafy, square. Leaves ovate, acute, entire, rather paler than in the true *polyspermum*. Clusters numerous, axillary, the larger ones imperfectly cymose and spreading; the rest rather spiked and elongated; all destitute of small leaves. Seed orbicular, blackish, scarcely dotted.

We trust we have distributed the synonyms of these two species justly. It appears from Mr. Davall's herbarium that they both grow in Switzerland, and he seems to have suspected their being distinct.



✓.

10

CHENOPODIUM maritimum.*Sea Goosefoot.**PENTANDRIA Digynia.*

GEN. CHAR. *Cal.* 5-cleft, inferior. *Cor.* none. *Seed* 1, lenticular, invested with the closed five-sided calyx.

SPEC. CHAR. Leaves awlshaped, semicylindrical. Flowers axillary, sessile.

SYN. *Chenopodium maritimum.* *Linn. Sp. Pl.* 321. *Huds.* 107. *Witb.* 273. *Hull.* 57. *Relb.* 106. *Dicks. H. Sicc. fasc.* 4. 7.

Blitum Kali minus album dictum. *Raii Syn.* 156.

A VERY frequent plant on the sea-shore, more especially where the soil is muddy, flowering about July and August.

Root fibrous, annual, small in proportion to the whole herb. Stem erect, much branched, roundish, leafy. Leaves alternate, semicylindrical, sharpish, smooth, succulent, abounding with a salt juice. Flowers sessile, clustered, green, with a pair of bractæ to each. Stamina shorter than the calyx. Seeds minutely striated, of a deep shining black.

Mr. Doody has observed that this herb is an "excellent boiled sallad," a term we are not adepts enough in cookery to understand. The experiment may easily be made by those who reside near the coast. It abounds, like many other maritime plants, with alkaline salt, and is one of those which are indiscriminately collected in the warmer parts of Europe for the manufactory of glass.



✓

100

BETA maritima.

*Sea Beet.**PENTANDRIA Digynia.*

GEN. CHAR. *Calyx* 5-leaved. *Cor.* none. *Seed* kidney-shaped, within the substance of the base of the calyx.

SPEC. CHAR. Stems procumbent. Flowers in pairs. Calyx entire.

SYN. *Beta maritima.* *Linn. Sp. Pl.* 322. *Huds. Fl. An.* 108. *With. Bot. Arr.* 257.

B. sylvestris maritima. *Raii Syn.* 157.

A NATIVE of the sea shore in several parts of England, more especially in muddy places. Dr. Smith found it by the river side just below Lynn, with *Atriplex pedunculata* and other rarities. The specimen here delineated was gathered near Scarborough by Mr. William Travis, and we are the more obliged to this gentleman for his communication, as there is no figure of *B. maritima* extant.

Root, according to Ray, perennial, by which he says it differs from the garden Beets; its substance thick and fleshy. Stems several, prostrate, a circumstance which the form of our page would not allow of being duly expressed in the plate. Leaves succulent, the edge waved but entire, decurrent into the foot-stalk; the radical ones numerous and larger; those on the stem all turned upwards from the ground, and bearing in their *axillæ* clusters of small leaves and flowers. The stem terminates in a more or less compound leafy spike, bearing the flowers either in pairs or solitary, never many together, by which circumstance, added to its prostrate stem and consequently vertical stem-leaves, and the keel of the calyx-leaves being entire, not toothed as in *B. vulgaris*, this species is with certainty distinguished, according to Linnæus, who cultivated it in his garden, and remarks that it flowered the first year. He thought it an annual. With us it appears to be perennial, flowering in August and September. The stigmas are very frequently three in number.



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S A L S O L A Kali.

*Prickly Saltwort.**PENTANDRIA Digynia.*

GEN. CHAR. *Cal.* 5-cleft; its base capsular. *Cor.* none. *Seed* 1, with spiral cotyledons.

SPEC. CHAR. Herbaceous, procumbent. Leaves awl-shaped, spinous, rough. Flowers axillary. Calyx margined.

SYN. *Salsola Kali.* *Linn. Sp. Pl.* 322. *Huds.* 107. *Witb.* 278. *Hull.* 57. *Dicks. H. Sicc. fasc.* 12. 14. *Woodv. Med. Bot. t.* 143.

Kali spinosum cochleatum. *Raii Syn.* 107.

VERY abundant on all sandy sea-shores, flowering copiously in July.

Root annual, fibrous. Stem very much branched, spreading in all directions, and forming a large round bush, almost inaccessible on account of the numerous prickly leaves, which are alternate, spreading, awlshaped, channelled, dilated at the base, rough, each tipped with a very sharp spine. Flowers axillary, solitary, sessile, with three bractæ, resembling the leaves at the base of each. Leaves of the calyx externally dilated into a broad reddish waved margin; internally closely approaching each other, and covering the seed like a capsule. The seed is top-shaped, and its cotyledons curiously twisted into a spiral form; by which character this genus is essentially distinguished from *Chenopodium*, and all others of the same natural order.

Salsola Kali contributes more generally to the manufacture of Soda, for making glass, than *Chenopodium maritimum*, but is not reckoned equal to some other species of *Salsola*.



Sept 17

J

S A L S O L A fruticosa.

*Shrubby Saltwort.**PENTANDRIA Digynia.*

GEN. CHAR. *Cal.* 5-cleft; its base capsular. *Cor.* none.
Seed 1, with spiral cotyledons.

SPEC. CHAR. Erect, shrubby. Leaves semicylindrical,
 bluntish, without spines.

SYN. *Salsola fruticosa.* *Linn. Sp. Pl.* 324. *Huds.* 108.
Witb. 278. *Hull.* 57.

Blitum fruticosum maritimum, Vermicularis frutex
dictum. Raii Syn. 156.

THE first person mentioned as the discoverer of this plant in England is the famous Sir Thomas Brown, M. D. of Norwich, so well known by his *Religio Medici* and other learned productions. He found it on the Norfolk coast, where it still grows, about Wells and Cley, as well as in Suffolk. Mr. Lambert favoured us with wild specimens from Weymouth.

This forms an elegant evergreen shrub, flowering in July and August, not unworthy of a place in gardens. It is propagated by layers, scarcely, if at all, by cuttings. The stem is about 2 feet high or more, erect, branched, woody; the branches also erect, and thickly clothed with alternate, sessile, semicylindrical, bluntish, succulent, rather glaucous leaves. Flowers inconspicuous, sessile, solitary, green, with 3 small bractæ. Seed top-shaped, its cotyledons less convoluted than those of the last described species.

The leaves have an herbaceous flavour, with a slight degree of salt and some acrimony.



Sal. repens L. var. *repens*

[1886]

ULMUS campestris.

Common Elm.

PENTANDRIA Digynia.

GEN. CHAR. *Cal.* 4 or 5-cleft, inferior, permanent.
Cor. none. *Capsule* membranous, compressed, nearly flat, with 1 seed.

SPEC. CHAR. Leaves doubly serrated, rough, unequal at the base. Flowers nearly sessile, four-cleft, with four stamens. Fruit oblong, naked.

SYN. *Ulmus campestris.* *Linn. Sp. Pl.* 327. *Sm. Fl. Brit.* 281. *Huds.* 109. *With.* 278. *Hull.* 57. *Relh.* 103. *Sibth.* 86. *Abbot.* 55.

U. suberosa. *Willd. Sp. Pl. v.* 1. 1324? *Ehrh. Arb.* 142?

U. vulgatissima, folio lato scabro. *Goodyer in Ger. em.* 1480. *Raii Syn.* 468.

COMMON in scattered woods and hedges in the southern parts of England principally, flowering in April, and ripening seed in June. It grows to a considerable height before it blossoms, with a rugged crooked trunk and branches. The wood is hard and tough, particularly durable in wet situations. Hence it is preferred for coffins, administering to that folly and vanity in humble life, which in higher ranks uses lead or masonry, for the purpose of keeping the dead as long as possible in odious noxious corruption, instead of mixing with their pure parent earth.

The leaves come forth as the fruit ripens, and are alternate, on short stalks, ovate inclining to rhomboid, unequal at the base, doubly serrated, rough on both sides, from 1 to 3 inches long. Flowers from distinct buds, in numerous dense round clusters, almost sessile, with fringed bractees. Calyx 4-cleft, fringed, light red or brownish. Stamens 4, equal, smooth, with large, roundish, purple, 2-lobed anthers. Stigmas fringed on the upper edge, at length dilated at the other, and united with the membranous smooth wings of the oblong capsule.

Perhaps the *U. suberosa* of Ehrhart and Willdenow is the cultivated Dutch elm, with corky bark, which seems to be distinct from this, and has not been thought wild in England: yet I suspect it may be the *U. minor, folio angusto scabro*, of Goodyer and Ray, which I hope some Hampshire botanist will ascertain, that we may know whether it ought to find a place in our Flora.

[2161]

ULMUS *suberosa*.
Cork-barked Elm.

PENTANDRIA Digynia.

GEN. CHAR. *Cal.* 4- or 5-cleft, inferior, permanent.
Cor. none. *Capsule* membranous, compressed, nearly flat, with 1 seed.

SPEC. CHAR. Leaves doubly and sharply serrated, pointed, rough, unequal at the base. Flowers on short stalks, four- or five-cleft, with four or five stamens. Fruit roundish, naked, cloven. Branches spreading; their bark corky.

SYN. *Ulmus suberosa.* *Ehrh. Arb.* 142. *Willd. Sp. Pl. v. 1.* 1324. *Baumz.* 391.

U. campestris β . *Sm. Fl. Brit.* 281. *Huds.* 109. *With.* 279. *Hull. ed.* 2. 75.

U. minor, folio angusto scabro. *Ger. em.* 1480. *Raii Syn.* 469.

OUR conjecture at p. 1886 is so far confirmed, by the accurate observations and kind communications of our friend Mr. Borrer, that we can now with certainty publish this, the most common Sussex elm, as the *U. suberosa* of Ehrhart (whose specimen precisely accords with ours), and consequently of other German writers. The late Mr. Crowe was always of opinion that this was the origin of all the cultivated varieties of Dutch Elm, &c., but he was not aware of its being a native of Britain.

The branches spread widely, and their bark of a year old is covered with a very dense fine sort of cork, with deep fissures. The leaves are larger than in *U. campestris*, t. 1886, more pointed, and more sharply and finely serrated. Bunches of flowers, which come forth in March, more hairy, and each flower on a rather longer stalk; its segments erect, varying in number from 4 to 5, as well as the stamens. Fruit rounder than in *campestris*, much more deeply cloven than in *montana*, t. 1887, to which latter our *U. suberosa* appears in most respects more akin than to *campestris*, yet they are surely all three distinct. We have now only to request some Scottish botanist to search out *U. ciliata* of Ehrhart by its fringed capsule. See p. 1887.

We ought at *U. montana*, t. 1887, to have quoted *Sm. Fl. Brit.* 282, after *Bauh. Pin.* 427.



U L M U S glabra.
Smooth-leaved, or Wych Elm.

PENTANDRIA Digynia.

GEN. CHAR. *Cal.* 4- or 5-cleft, inferior, permanent.
Cor. none. *Capsule* membranous, compressed,
 nearly flat, with 1 seed.

SPEC. CHAR. Leaves doubly serrated, unequal at the
 base, smooth. Flowers nearly sessile, five-cleft.
 Fruit obovate, naked, cloven.

SYN. *Ulmus glabra.* *Mill. Dict. ed. 8. n. 4. Cul-*
lum, Angl. Fl. 97.

U. montana β . *Sm. Fl. Brit. 282. var. 2. Hull.*
ed. 2. 75.

U. folio glabro. *Ger. em. 1481. Raii Syn. 469.*

U. campestris var. 3. *With. 279. Hull. 57.*

MR. EDWARD FORSTER, so accurately attentive to the
 botany of his own country, has procured us specimens of this
 Elm, which he says is the most abundant species in some parts
 of Essex. We had the flowers in March, the fruit in May,
 and the leaves in the end of June.

This is an elegant tree, with spreading drooping branches,
 whose bark is smooth and blackish. The leaves are more ob-
 long and more rigid than in *U. suberosa*, *t. 2161*, very un-
 equal at the base, quite smooth to the touch above, and nearly
 so beneath, except that the rib and veins are there more or less
 downy, like other species. The flowers are nearly sessile,
 fringed, 5-cleft, and the fruit small, obovate, cloven at the
 top, often reddish. Goodyer in Gerard's Herbal says the
 wood is preferred for the naves of cart-wheels.—Mr. Forster
 is of opinion that our *campestris*, *t. 1886*, is the *U. minor*, *folio*
angusto scabro, of Goodyer and Ray, and very little known
 out of Norfolk, our *suberosa*, *t. 2161*, being *U. vulgatissima*,
folio lato scabro, of those writers. If so, our Norfolk Elm is
 well worthy of cultivation in other counties for its hard and
 durable wood.



Publ. 1881 published by J. S. Sowerby, London

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[1887]

U L M U S montana.
Broad-leaved Elm. Wych Hazel.

PENTANDRIA Digynia.

GEN. CHAR. *Cal.* 4 or 5-cleft, inferior, permanent.
Cor. none. *Capsule* membranous, compressed, nearly flat, with 1 seed.

SPEC. CHAR. Leaves doubly serrated, pointed, rough, unequal at the base. Flowers on short stalks, five- or six-cleft, with five or six stamens. Fruit roundish, naked.

SYN. *Ulmus montana.* *Bauh. Pin.* 427. *With.* 279.
Hull. 57. *Relh.* 103.

U. campestris. *Fl. Dan. t.* 632. *Huds.* 109, γ.
Willd. Sp. Pl. v. 1. 1324.

U. glabra. *Huds. ed.* 1. 95.

U. effusa. *Sibth.* 87. *Abbot.* 55.

U. nuda. *Ehrh. Arb.* 62.

U. folio latissimo scabro. *Goodyer in Ger. em.* 1481.
Raii Syn. 469.

COMMON in woods and hedges throughout Britain, flowering in March or early in April, and ripening seed in June when the leaves are full-grown. The wood of this is much less hard and valuable than the preceding. The tree is large, with spreading, often drooping, and sometimes quite pendulous branches. Leaves much larger than in *U. campestris*, and somewhat less rough, with longer points. Flowers a little larger, and on rather longer stalks, blush-coloured. Calyx fringed, in 5, 6 or even 7 segments, with the same number of stamens. Fruit larger, round rather than oblong, sometimes obovate, more scariose and hop-like than in the *campestris*.

We trust the above synonyms are quite correct, but we are inclined to think the *U. folio glabro* of Goodyer and Ray may be a distinct species, and that it is the *ciliata* of Ehrhart, *effusa* of Willdenow. To settle this point we must seek for indubitably wild British specimens. In the mean while it is of use to ascertain two species, as the genus has long been a reproach to botanists. If Lightfoot be correct, this *U. folio glabro* is common in Scotland. Goodyer says it grows in Essex between Rumford and Stubbers.

1887



How much published by the American Museum of Natural History

U L M U S major.

Dutch Elm.

PENTANDRIA Digynia.

GEN. CHAR. *Cal.* 4- or 5-cleft, inferior, permanent.
Cor. none. *Capsule* membranous, compressed, nearly flat, with 1 seed.

SPEC. CHAR. Leaves unequally, rather bluntly, serrated, rough, unequal at the base. Flowers nearly sessile, four-cleft, with four stamens. Fruit obovate, naked, slightly cloven.

SYN. *Ulmus hollandicus.* *Mill. Dict. ed. 8. n. 5.*

U. major hollandica, angustis et magis acuminatis samaris, folio latissimo scabro. *Pluk. Alm. 393.*

WHETHER this Elm ought to be considered as a British native, may be doubtful. It occurs sometimes in hedges, though Miller says it was brought from Holland in King William's reign, and, being recommended for its quick growth, was a fashionable tree for hedges in gardens, but afterwards fell into disuse. He adds that "the wood is good for nothing, so it is almost banished this country."

We had confounded this species with our *suberosa*, *t.* 2161; but Mr. E. Forster, to whom we are obliged for specimens, is convinced of its being very distinct, though intermediate between that and *montana*, *t.* 1887. The broad rough bluntly serrated leaves, and the fruit, are most like the latter; but the branches spread widely in a drooping manner, and their bark is extremely rugged and corky, much more so than in our *suberosa*. The latter however is certainly Ehrhart's plant, and consequently, we presume, Willdenow's. The flowers in the present are nearly sessile, with four blunt segments, and as many stamens, at least in all we have seen.



May 1 - 1910 collected by J. H. Lawrence & J. H. ...

CUSCUTA europæa.

Greater Dodder.

TETRANDRIA Digynia.

GEN. CHAR. *Cal.* 4-cleft. *Corolla* of one petal. *Cap-
sule* 2-celled.SPEC. CHAR. Flowers nearly sessile. *Corolla* without
scales. Stigmas simple.SYN. *Cuscuta europæa.* *Linn. Sp. Pl.* 180. *With.*
Bot. Arr. 165. *Fl. Dan. t.* 199. inaccurate.

WE have been led into an error in the first volume of this work, p. 55, concerning the most common British *Cuscuta*, which, from trusting too much to the Linnæan specific character, we there published as the *europæa*, notwithstanding Dr. Stokes's just remarks in the *Bot. Arr.* which ought certainly to have warned us. We however take the first opportunity of correcting this error, Mr. Sowerby having last autumn received wild specimens of the real *europæa* from Mr. Alexander Smith of Aberdeen, and others from the Rev. Mr. Hemsted, which have at the same time verified the plant as a native of Britain, and helped us to fix an essential character between that and the other. This character consists in the total want of the nectary, or more properly scales, at the base of the stamina. The true *europæa* is also larger in all its parts, except that the styles are rather shorter, and generally more divaricated. The simple stigmas of both these species distinguish them from *C. americana*, which has capitate stigmas. The number of stamina, and segments of the corolla, varies from 4 to 5 in all the species; the latter we have found the most prevailing, at least in the *Epithymum*, *americana*, and a new East Indian species; so that perhaps the genus ought to be removed to the 5th class. *C. europæa* grows parasitically upon nettles, flax, thistles, &c. flowering in August and September. The corolla is very thin, pellucid, reticulated, and permanent.

We beg leave to substitute the following synonyms and characters for those already given to our *Tab.* 55.

CUSCUTÀ Epithymum.

*Lesser Dodder.*SPEC. CHAR. Flowers sessile. A fringed scale close at
the base of each stamen. Stigmas simple.SYN. *Cuscuta Epithymum.* *Linn. Syst. Veg. ed.* 13.
140. *With. Bot. Arr.* 166. *Fl. Dan. t.* 227. bad.

THE synonym of Ray probably belongs to this, being by far the most common, but the *C. major* of Bauhin must be the other. British authors in general have either confounded the two, or taken, as we did, the *Epithymum* for the *europæa*.

CUSCUTA Europæa.

*Greater Dodder.**TETRANDRIA Digynia.*

GEN. CHAR. *Calyx* four-cleft. *Corolla* of one petal.
Capsule two-celled.

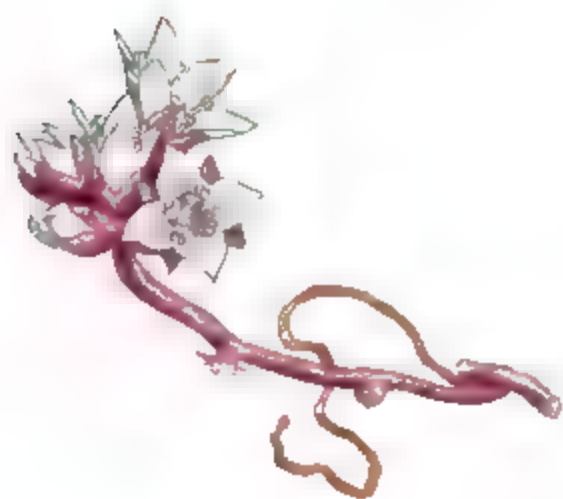
SPEC. CHAR. Flowers sessile, mostly four-cleft.

SYN. *Cuscuta Europæa*. *Linn. Sp. Pl.* 180. *With. Bot. Arr.* 165.

C. major. *Raii Syn.* 281.

OF all parasitical plants, the Dodder tribe are the most singular, trusting for their nourishment entirely to those vegetables about which they twine, and into whose tender barks they insert small villous tubercles serving as roots, the original root of the Dodder withering away entirely as soon as the young stem has fixed itself to any other plant, so that its connexion with the earth is cut off.

The species of *Cuscuta* are very ill understood. Notwithstanding the doubts of Dr. Stokes in the *Bot. Arr.* whether the true Linnæan *C. Europæa* was ever found in England (the *C. Epithymum*, which has five-cleft flowers, being the most frequent), we think there can be no doubt of its being our plant. This specimen was gathered on the common heath, *Erica vulgaris*, on One-tree-hill at Greenwich. The flowers are generally found with 4 divisions, rarely occurring with 5. It may be met with plentifully in flower in July and August.



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SWERTIA perennis.

*Marsh Swertia.**PENTANDRIA Digynia.*

GEN. CHAR. *Cor.* wheel-shaped, with a pair of honey-bearing pores at the base of each segment. *Caps.* superior, of 1 cell, with 2 valves.

SPEC. CHAR. Corolla in five segments. Radical leaves ovate.

SYN. *Swertia perennis.* *Linn. Sp. Pl.* 328. *Sm. Fl. Brit.* 284. *Huds.* 102. *With.* 280. *Hull.* 55. *Jacq. Fl. Austr. t.* 243.

AS a native of Britain this fine plant rests on the word of Hudson only, who asserts that Richardson found it in Wales, but does not mention his authority, nor has any other person confirmed the report. It is very rare even on the Alps, growing in watery meadows, and flowering in August. Having gathered it wild, and finding it very little altered in colour by drying, we have, after consulting Jacquin's figure, which is too pale, caused a very faithful representation to be made, which we trust will be the more acceptable as the plant can scarcely be cultivated in a garden. To be kept alive it must be planted in black bog earth, and constantly inundated to the height of 5 or 6 inches, so that it is hardly possible to transport the roots, though perennial, from their native mountains.

The long fibres of the root are intensely bitter. The herb is quite smooth. Stem a foot high, square. Leaves chiefly radical, on stalks, ovate, entire. Panicle of many greyish-blue flowers on purplish stalks. Corolla with many fine ribs, the nectaries fringed and greenish. Germen often abortive. The genus is next akin to *Gentiana*, and agrees with it in qualities.



GENTIANA Pneumonanthe.

*Marsh Gentian, or Calatbian Violet.**PENTANDRIA Digynia.*

GEN. CHAR. *Cor.* of one petal. *Capsule* superior, one-celled, two-valved, with two longitudinal receptacles.

SPEC. CHAR. Corolla bell-shaped, five-cleft. Flowers on foot-stalks. Leaves linear.

SYN. *Gentiana Pneumonanthe.* *Linn. Sp. Pl.* 330.
Huds. Fl. An. 102. *Witb. Bot. Arr.* 261.

G. palustris angustifolia. *Raii Syn.* 274.

WE are indebted for the wild specimen here figured of this rare and beautiful Gentian to the Rev. Mr. Charles Sutton, B. D. of Norwich, who gathered it on Stratton Strawless Heath, a few miles from that city, the very place in which it was found by the amiable Stillingfleet many years ago. It usually prefers a wet turfy soil, and flowers in August.

Mr. Sutton remarks that the leaf varies in figure from *linear* to almost *spatulate*; that the antheræ are united till the capsule swells, and forcibly separates them; and that after a wet spring the plant is found much more luxuriant, bearing five, six, or seven flowers, instead of one or two.

Such a gigantic specimen appears to have occasioned Linnaeus to define it *corollis oppositis*, having *opposite corollas*, or rather *flowers*; but we have omitted this in our specific character, as tending to mislead. The connection of the antheræ is full as remarkable as that of *Lobelia*, and more so than in *Viola*; both which, on account of such an adhesion, are placed in the class Syngenesia: but the inconstancy of this character, except in *compound flowers*, seems to authorise the abolition of the order Syngenesia Monogamia altogether.



Schizanthus luteus L. 1751

GENTIANA acaulis.

*Dwarf Gentian.**PENTANDRIA Digynia.*

GEN. CHAR. Cor. of 1 petal, tubular at the base, destitute of honey-bearing pores. Caps. superior, one-celled, two-valved, with 2 longitudinal receptacles. Seeds many.

SPEC. CHAR. Flower solitary, five-cleft, bell-shaped, about as long as the quadrangular stalk.

SYN. *Gentiana acaulis.* Linn. *Sp. Pl.* 330. Sims and Konig, *Annals of Bot.* v. 2. 196. Turn. and Dillw. *Bot. Guide*, 504. Curt. *Mag.* v. 2. t. 52. Jacq. *Austr. t.* 135.

G. alpina. Schleich. *Cat.* 56.

Gentianella verna major. Ger. *em.* 436.

DRAWN from the original specimen gathered near Haverford West in South Wales, and sent to Mr. Konig, by M. de St. Amans, as mentioned in the *Annals of Botany*, a work which by its great merit and utility has deserved much more patronage from the public than it has experienced, and which, we are sorry to hear, is likely to be discontinued. Its loss to the science of botany in England can scarcely be compensated.

We are nevertheless not at all satisfied of this beautiful *Gentiana* being really a British native. It is common in gardens; and in favourable situations, in the choice of which it is, as Curtis well observes, rather capricious, it will easily run wild. It has been shown us as a wild plant even in Middlesex; which no botanist could assent to. Its natural station is very high on the Alps, where it flowers in June and July.

This cannot be confounded with any other species. The root is perennial, branching, bearing many tufts of sessile, ovate, broad leaves. Stalks or stems very various in length, solitary, square, single-flowered, bearing 1 or 2 pair of leaves. Flower generally longer than the stem, remarkable for its size and beauty.

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May 1 1866 Published by J. A. Sowerby, London.

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GENTIANA verna.

*Spring Gentian.**PENTANDRIA Digynia.*

GEN. CHAR. *Cor.* of one petal. *Capsule* superior, one-celled, two-valved, with 2 longitudinal receptacles.

SPEC. CHAR. Corolla five cleft, salver-shaped, crenate; segments toothed at their base. Leaves clustered, ovate.

SYN. *Gentiana verna.* *Linn. Sp. Pl.* 331.

G. n. 644. *Hall. Hist. V.* 1. 280. *Davall.*

Gentianella alpina verna. *Ger. em.* 436. *f.* 2. *How. Phytolog.* 46. *Merr. Pin.* 45.

THIS very elegant plant was gathered, in April 1797, in Teesdale forest, Durham, by Mr. John Binks, and sent us by the Rev. Mr. Harriman, the first botanist who has ascertained it in England, though the inhabitants of the forest know it well by the name of Spring Violet, as it copiously enamels that country at a time when no other flower enlivens the dreary scene. Dr. How in his *Phytologia*, printed in 1650, mentions this Gentian as having been found abundantly in the mountains betwixt Gort and Galloway, Ireland, by Mr. Heaton; yet Ray has only reckoned it among the doubtful natives of these kingdoms. We have been favoured with fine recent specimens by the Hon. Mrs. Barrington. Mr. Oliver of Middleton has communicated a number of dried ones, which have been carefully compared with the Linnæan Herbarium, and prove this the real *G. verna*; though it is by no means clear that *G. Bavarica*, differing only in having a taller stem, and spatulate blunt leaves, is a distinct species, for some of Mr. Oliver's specimens have very blunt though still ovate leaves. Linnæus did not well understand the species of *Gentiana*, *Anemone*, and some others of Alpine growth.

The root of *G. verna* is perennial, thread-shaped, and creeping. Stems about an inch high, simple, single-flowered, thickly clothed with leaves which are more especially clustered in the lower part, and are of an ovate form, entire, generally pointed. Flower solitary, terminal, erect, large. Calyx with 5 waved carinated angles, and 5 equal sharp teeth. Corolla with a plaited cylindrical tube, twice as long as the calyx, and a flat limb in 5 equal obovate crenated lobes, of a most vivid blue, with a tooth on each side at their base. Stamina shorter than the tube. Germen cylindrical. Style really simple, with a flat, feathery, 2-lobed stigma. The whole herb is smooth, less bitter than most Gentians. Sometimes the flowers are of a paler blue.



GENTIANA nivalis.

Small Alpine Gentian.

PENTANDRIA Digynia.

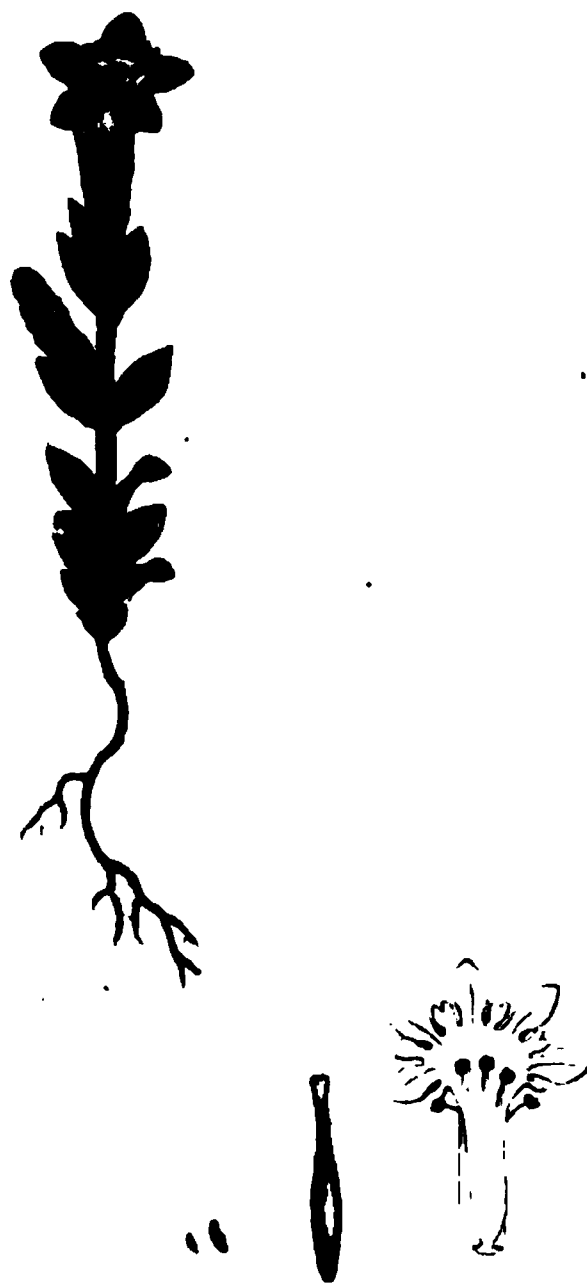
GEN. CHAR. *Cor.* of 1 petal, tubular at the base, destitute of honey-bearing pores. *Caps.* superior, one-celled, two-valved, with 2 longitudinal receptacles. *Seeds* many.

SPEC. CHAR. Corolla five-cleft, funnel-shaped. Angles of the calyx even, acute. Stem many-flowered.

SYN. *Gentiana nivalis.* *Linn. Sp. Pl.* 322. *Dicks. Tr. of Linn. Soc.* v. 2. 290. *Sm. Fl. Brit.* 286. *With.* 280. *Hull.* 55. *Fl. Dan.* t. 17.

TRULY does this hardy little plant deserve the name of *nivalis*, for on the Alps it is only to be found about the limits of perpetual frost, and in our own country it has been observed no where but on the summits of one or two of the highest mountains of Scotland, which are seldom three months in the year without snow. It is annual, flowers in July or August, and quickly ripens its seed. We are obliged to Mr. G. Don for wild specimens.

The root is slender, tapering, and branching into a few fibres. Stem 2 or 3 inches high, erect, more or less branched, square, leafy, bearing from 2 to 6 or 7 flowers; our British specimens are generally less luxuriant than those of Switzerland. Leaves elliptical, entire, the lower ones most acute. Flowers solitary at the end of each branch, erect, slender; their tube green, the limb of a beautiful ultramarine colour, in 5 larger lobes with small cloven segments between them. The calyx is tubular, with 5 sharp, plain, (not waved,) equal angles, and as many teeth. Stamina 5, enclosed within the tube of the corolla. Styles united at their base.—The whole herb is smooth, as we believe is the case with every Gentian.



v. 1. 1801. Published by J. Sowerby. London.

GENTIANA Amarella.

*Autumnal Gentian.**PENTANDRIA Digynia.*

GEN. CHAR. *Cor.* of one petal. *Capsule* superior, one-celled, two-valved, with two longitudinal receptacles.

SPEC. CHAR. Corolla five cleft, salver-shaped, bearded in the orifice. Segments of the calyx equal.

SYN. *Gentiana Amarella.* *Linn. Sp. Pl.* 334. *Huds. Fl. An.* 103. *With. Bot. Arr.* 262. *Relb. Cant.* 100. *Sibth. Oxon.* 85.

Gentianella fugax autumnalis elatior, Centaurii minoris folio. *Raii Syn.* 275 ?

β *G. fugax verna seu præcox.* *Raii Syn.* 275.

FOUND in grassy pastures above lime-stone rocks, varying in size according to the degree of moisture, and flowering in August and September—The variety β flowers from April to June.

Root annual, twisted, yellowish. Stem square, erect, bearing several pair of sessile, ovate, 3-nerved, dark-green leaves and clothed from top to bottom with flowers, on short, axillary, forked side branches, one being terminal. Calyx pale, with green ribs, and divided half way down into 5 lanceolate, nearly equal, segments. Tube of the corolla twice as long as the calyx; limb in 5 segments, rarely but 3 or 4, horizontal when the sun shines, the orifice crowned with a purple upright fringe, which conceals the stamina. Germen oblong; styles very short; stigmas divaricated. The whole herb is intensely bitter, and possesses the stomachic virtues of its congeners.

It is extremely difficult to ascertain the 3 Gentians mentioned in Ray's Synopsis, 275. Neither he, nor his editor Dillenius, seems to have been aware of the real difference between *G. Amarella* and *campestris*, and their Synonyms are almost all quoted with hesitation. We can therefore only guess, from the slender materials before us, what they intended.—As to the *Vernal dwarf Gentian*, we quote it as a variety, having been favoured with a specimen gathered by the late accurate Sir John Cullum, on the heath between Grantham and Ancaster, in flower June 6, 1774, which he therefore reasonably presumed was the above plant of Ray. But it differs in no respect from *G. Amarella*, except in time of flowering. As we are on the ground of conjecture, may not such early-flowering specimens some that happened to spring up in the preceding autumn, stood the winter?



GENTIANA campestris.

Field Gentian.

PENTANDRIA Digynia.

GEN. CHAR. *Cor.* of one petal. *Capsule* superior, one-celled, two-valved, with two longitudinal receptacles.

SPEC. CHAR. Corolla four-cleft, bearded in the orifice. Two outer segments of the calyx very large.

SYN. *Gentiana campestris.* *Linn. Sp. Pl.* 334. *Hulf. Fl. An.* 103. *Witb. Bot. Arr.* 262. *Sibth. Oxon.* 86.

G. pratensis flore lanuginoso. *Raii Syn.* 275 ?

WE received this from near Bury, along with the preceding. It grows in pastures, more particularly towards the sea; nor is it so much confined to a lime-stone soil as that species. It is annual, flowering in September and October.

This in habit is much like the last, though rather paler in colour altogether, and never so tall: the stem being less drawn up, the flowers fewer, and on longer flower-stalks, they appear more corymbose. But the essential and all-sufficient mark of distinction is in the calyx being deeply divided into 4 unequal segments, 2 of which are external, opposite, oval, very large, completely enfolding and concealing the 2 others, which are lanceolate and not a fifth part so broad. This character was noted by Linnæus in *Flo. Lapponica*, and is adopted by Haller. Surely it ought to have been mentioned in *Sp. Pl.* But it is still more wonderful that Linnæus should have doubted whether this were a sufficient distinction.

When we presume ours to be the above plant of Ray, we by no means believe it to be also that of Bauhin, which is most probably (as all authors suppose) *G. Amarella*.



Phlox subulata Mill. var. *subulata*

ERYNGIUM maritimum.

*Sea Eryngo.**PENTANDRIA Digynia.*

GEN. CHAR. *Involucrum* of many leaves. *Flowers* in little dense heads. *Receptacle* conical, scaly. *Seeds* bristly.

SPEC. CHAR. Radical leaves roundish, plaited, spinous. Heads of flowers on stalks. Scales three-cleft.

SYN. *Eryngium maritimum.* *Linn. Sp. Pl.* 337. *Sm. Fl. Brit.* 288. *Huds.* 109. *With.* 283. *Hull.* 58. *Woodv. Med. Bot.* t. 102. *Dicks. H. Sicc. fasc.* 10. 3. *E. maritimum.* *Raii Syn.* 222.

COMMON in the loose sand of the sea shore, flowering in July and August.

Root long, creeping, perennial. Herb very rigid, all over glaucous, which renders it strikingly conspicuous, and every part is smooth. Stem round, furrowed, branched and bushy, about a foot high. Leaves of a roundish kidney-shape, plaited, lobed, ribbed, with spinous teeth; the radical ones are more rounded, and stand on foot-stalks. Flowers in dense blue terminal heads, each surrounded by an involucre like the leaves. Scales of the receptacle three-cleft, whereas those of *E. campestre*, t. 57, are simple. Petals hooked.

“Eryngo roots and Bohea tea” have been celebrated by our most witty poet Prior for their restorative or stimulating qualities. Under this idea, perhaps not ill-founded with respect to the Eryngo, these roots have been much used in domestic medicine, and are sometimes sold candied; a very elegant mode of preparing them. A shop at Colchester, Mr. Great’s, has been famous for them for several generations.



ERYNGIUM campestre.

Field Eryngo.

PENTANDRIA Digynia.

GEN. CHAR. *Flowers* in little dense heads. *Receptacle* scaly.

SPEC. CHAR. Leaves embracing the stem, divided in a pinnated manner.

SYN. *Eryngium campestre.* *Linn. Sp. Pl.* 337. *Huds. Fl. An.* 110. *With. Bot. Arr.* 264.

E. vulgare. *Raii Syn.* 222.

ALTHOUGH very common on the continent, and therefore denominated *vulgare* by Bauhin, Camerarius, &c. this species is so very rare in England, that we cannot follow those British authors, however respectable, who name it *communis Eryngo*. We are assured by the Rev. Mr. Wood, of Leeds, that it still grows by the Watling-street road, opposite Brook-hall, near Daventry, as mentioned by Ray. Our figure was drawn from a garden specimen compared with a wild one, with which it perfectly agreed.

The root is perennial and strong. Stem a foot high, much branched. The whole plant very rigid, and of a pale green. It flowers in July and August. The petals are white or purplish.



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HYDROCOTYLE vulgaris.

*Marsh Penny-wort. White-rot.**PENTANDRIA Digynia.*

GEN. CHAR. *Umbel* simple. *Involucrum* of about 4 leaves. *Petals* undivided. *Fruit* circular, compressed.

SPEC. CHAR. Leaves peltate. Umbels of five flowers.

SYN. *Hydrocotyle vulgaris*. *Linn. Sp. Pl.* 338. *Sm. Fl. Brit.* 290. *Hudsf.* 110. *With.* 284. *Hull.* 58. *Relb.* 107. *Sibth.* 91. *Abbot.* 57. *Curt. Lond. fasc.* 6. t. 19. *Raii Syn.* 222.

ON boggy commons, moist heaths, and all watery places in general that are not stagnant, the *Hydrocotyle vulgaris* abounds, and may be found in flower from May to the end of June. The herb is perennial, and the prostrate stems spread very far, taking root at every joint, and also producing from the same point several upright, simple, smooth or hairy, footstalks, each of which supports a horizontal, peltate, roundish, crenate, smooth and shining leaf, as well as one or more flower-stalks not so high as the leaves, having a pair of bractæ at their base, and bearing an umbel of 5 flowers, which is often proliferous, producing another such umbel from its centre; but the partial stalks are never branched or compounded like those of most umbelliferous plants; indeed they are so short as to be scarcely discernible. *Involucrum* of 4 or 5 membranous leaves. *Calyx* very minute. *Petals* ovate, spreading, undivided, white or reddish. *Fruit* orbicular, furrowed, compressed.

The name of White-rot was given from a supposition that this plant caused the disease in sheep called the rot; but it is doubtful if they will ever taste it, and most people now attribute that disease to the animals inhabiting wet pastures, where indeed the *Hydrocotyle* grows, but which are in some other way noxious to their constitution.



V

S I S O N inundatum.

*Water Honewort.**PENTANDRIA Digynia.*

GEN. CHAR. *Fruit* oval, striated. *Involucra* both general and partial, each of about four leaves.

SPEC. CHAR. Creeping. General umbel of only two rays, and wanting a general involucre.

SYN. *Sison inundatum*. *Linn. Sp. Pl.* 363. *Huds. Fl. An.* 120. *With. Bot. Arr.* 295. *Relb. Cant.* 117. *Sibth. Oxon.* 98.

Sium pusillum, foliis variis. *Raii Syn.* 212.

THIS we believe is not a very unfrequent inhabitant of wet places that are overflowed in winter, as well as of ditches and pools among other aquatics. Most authors, except Ray, make it annual. Others, as Linnæus, do not pretend to decide upon its duration, in which class we must humbly rank ourselves, only observing that, from its flowering so early as May, it is probably at least biennial.

The round, partly floating, stem throws out a few long simple fibres from the bottom, and is furnished with alternate pinnated leaves, whose membranous sheathing stipulæ embrace the stem. Such leaflets as are above the water are commonly wedge-shaped, and three-cleft, sometimes elliptical and undivided; those that are under water, especially at any depth, are finely divided into capillary segments, as in *Ranunculus aquatilis*. See a good remark on this subject in Ray's Synopsis, 212. The umbels are placed opposite to each leaf, just within the stipula, on longish footstalks, and consist of only two partial umbels, without any general involucre. Each partial umbel has about five white, slightly radiant, flowers, with oval, entire, spreading petals. Fruit compressed and striated.

We cannot help thinking this plant belongs rather to *Hydrocotyle* than to any other genus.



S A N I C U L A europæa.

*Wood Sanicle.**P E N T A N D R I A Dignia.*

GEN. CHAR. *Umbels* clustered in little heads. *Fruit* rough. *Central flowers* abortive.

SPEC. CHAR. Radical leaves simple. Flowers all sessile.

SYN. *Sanicula europæa*. *Linn. Sp. Pl.* 339. *Huds. Fl.*

An. 110. *Witb. Bot. Arr.* 266. *Relb. Cant.* 108.

Sanicula five *Diapensia*. *Raii Syn.* 221.

COMMON enough in woods, growing among dead leaves of trees, and flowering with the first heralds of summer in May. Gerarde says "it joyeth in a fat and fruitfull moist soile." He also remarks that "it is used in potions which are called *Vulnerarie* potions, or wound drinkes, which make whole and sound all inward wounds and outward hurts." Unhappily the experience of mankind since good Gerarde wrote has rather impaired the credit of such sovereign medicines. Ignorance is ever prone to confidence and wonder. The herb is bitter and pungently aromatic, but seems to partake of that virosc acrimony usual in umbelliferous plants which "joy in a fat and moist soile," and which is improved to a wholesome aromatic flavour in dry elevated situations.

The root is perennial, with long branched fleshy fibres. Leaves mostly radical, elegantly lobed and ciliated, deep green above, paler and more shining beneath. Stem twelve or eighteen inches high, but little branched, furrowed. Flowers often reddish. The central flowers of each little head or umbel have no styles, but in their place a glandular nectary (*Witbering*). The petals are all nearly equal; they are wanting in the seed-bearing flowers, as Scopoli remarks.



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B U P L E U R U M rotundifolium.

*Thorow-wax.**P E N T A N D R I A Dignia.*

GEN. CHAR. *Involucrum* longer than the umbels, five-leaved. *Petals* curled in. *Fruit* roundish, compressed, striated.

SPEC. CHAR. No general involucrum. Leaves perfoliate.

SYN. *Bupleurum rotundifolium.* *Linn. Sp. Pl.* 340. *Hudsf. Fl. An.* 111. *Witb. Bot. Arr.* 267. *Relb. Cant.* 108.

B. perfoliatum rotundifolium annuum. *Raii Syn.* 221.

A SOMEWHAT unfrequent annual in corn-fields, generally preferring a dry and chalky soil. Mr. Lewin communicated it from the neighbourhood of Dartford in Kent.

This herb like the Sanicle has the reputation of being a vulnerary, a quality which no medicine can have, any otherwise than as a tonic strengthening the constitution, nor can any external application be specifically healing or consolidating, nor be useful in any other way, than as a defence from the air.

The root is small and fibrous. Stem alternately branched, a little zigzag, clothed with singularly perfoliate leaves, which have occasioned the English name, from the old word *wax*, to grow. Both leaves and involucra are entire and sharp-pointed. The flowers are yellowish and inconspicuous, coming out in June and July. Every part of the herb is remarkably hard and rigid, and has a slight aromatic smell.



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B U P L E U R U M odontites.

*Narrow-leaved Hare's-ear.**PENTANDRIA Digynia.*

GEN. CHAR. *Partial Involucrum* of five leaves, longer than the umbels. *Petals* inflexed. *Calyx* obsolete. *Fruit* roundish, compressed, striated.

SPEC. CHAR. *Partial involucrum* of five ovate, awned, three-ribbed leaves; general of three or four. Branches widely spreading. Umbels all stalked. Leaves lanceolate.

SYN. *Bupleurum odontites.* *Linn. Sp. Pl.* 342. *Sm. Prod. Fl. Græc. Sibth.* v. 1. 177. *Ait. Hort. Kew.* ed. 2. v. 2. 121. *Jacq. Hort. Vind.* v. 3. t. 91. *Perfoliata minima, bupleuri folio.* *Column. Ecphr.* v. 1. 84. t. 247. f. 1, (*Perfoliatum angustifolium montanum.*)

THIS new addition to the *Flora* of Britain was gathered by the Rev. H. Beeke, D.D. early in July last, on the marble rocks about Torquay, Devonshire, where it is unquestionably wild. We indeed received a very diminutive specimen ten years ago from Devonshire, by favour of the Rev. Aaron Neck, which is subjoined to our principal figure. This last represents the usual wild appearance of the plant. Jacquin's plate gives, with equal exactness, the different habit it assumes in a garden. The Linnæan herbarium contains both on one sheet of paper.

This species is annual, flowering in July. It may easily be distinguished from the other two of British growth, t. 99 and t. 478. The stem is branched and much divaricated. Leaves lanceolate, acute; the lower ones rather spatulate. The leaves of the general involucrum have five ribs, of which the lateral ones are close together; those of the partial involucrum have usually three, sometimes attended by two more, near the margin. The petals are cream-coloured, with a tinge of red. Anthers yellow, large and conspicuous. The herb is astringent and bitter, rigid and smooth.



Oct. 2, 1906 collected by J. A. P. and by L. S. L.

B U P L E U R U M tenuissimum.

Slender Thorough-wax, or Hare's-ear.

PENTANDRIA Digynia.

GEN. CHAR. *Involucrum* longer than the umbels, five-leaved. *Petals* curled in. *Fruit* roundish, compressed, striated.

SPEC. CHAR. Umbels simple, alternate, of about 3 flowers, with an involucrum of 5 awl-shaped leaves.

SYN. *Bupleurum tenuissimum*. *Linn. Sp. Pl.* 343. *Huds.* 111. *With.* 285. *Relb.* 109.

B. minimum. *Raii Syn.* 221.

GATHERED in plenty by Mr. T. F. Forster on the shore near Worthing, Suffex. It prefers a muddy soil, overflowed by salt water, and is found at Lynn, Cley, and Holkham, Norfolk, flowering in August and September.

Root annual, tapering, but little branched. Herb slender, rigid, smooth, branched, erect. Stems zigzag, leafy. Leaves lanceolate, narrow, pointed, entire, alternate, tapering at the base. Umbels axillary, simple, sometimes arranged in a spike; each of them of about 3 small greenish yellow flowers, surrounded by an involucrum, much longer than themselves, of five lanceolate, pointed, ribbed, nearly equal leaves. The seeds are hemispherical, compressed, angular, and rugged.

The whole plant has a pungent disagreeable taste and smell, and is of an acrid quality. We do not know of its being applied to any use.



Salvia arvensis L.

ECHINOPHORA spinosa.

*Prickly Sampire.**PENTANDRIA Digynia.*

GEN. CHAR. *Partial Involucrum* turbinate, of one leaf, in six segments. *Marginal flowers* radiant, male, stalked; central one female. *Seeds* imbedded in the partial involucrum.

SPEC. CHAR. Leaflets awlshaped, spinous, three-cleft or undivided, entire.

SYN. *Echinophora spinosa.* *Linn. Sp. Pl.* 344. *Sm. Fl. Brit.* 293. *Rees's Cyclop.* v. 12. *Huds.* 112. *With.* 285. *Hull. ed.* 2. 78. *Cavan. Ic. t.* 127.

E. maritima spinosa. *Dill. in Raii Syn.* 220.

Crithmum spinosum. *Ger. em.* 533. *Raii Syn. ed.* 2. 114.

OUR plan requires that every plant admitted into the *Flora Britannica* should find a place in this work. The present is one of those of which we have been obliged to recur to an exotic specimen; for though there are numerous authorities for its having been formerly found, on various and remote parts of the English sea coast, nobody can meet with it now. Yet as the *Ligusticum cornubiense* was, for a longer space of time, supposed to be lost, we do not despair of the *Echinophora*. Its aspect and characters are too distinct to admit a possibility of any other plant having been mistaken for this. It flowers in July.

The root is perennial, long, tapering, fleshy, said to have the taste of a parsnep, with some saltness, and a stimulating quality. Stem bushy, furrowed, excessively branched, and so beset with spinous pinnate opposite leaves, as to be nearly inaccessible. Umbels terminal, with lanceolate, spinous involucral leaves, both general and partial. Flowers white, occasionally with a reddish tinge. Petals of the marginal ones unequal, with an inflexed fringed tip. Calyx spinous. Rudiments of the seeds two, one of which only comes to perfection, lodged in the fleshy centre of the partial umbel.

2413.



Pl. 1. 1818. published by J. S. Smith, London

TORDYLIUM officinale.

*Small Hart-wort.**PENTANDRIA Digynia.*

GEN. CHAR. *Invol.* long and undivided. *Corolla* radiant. *Flowers* all hermaphrodite. *Fruit* nearly orbicular, flattened, notched in the margin.

SPEC. CHAR. Partial involucre about as long as the flowers. Leaflets ovate, cut, crenate. Stem downy.

SYN. *Tordylium officinale.* *Linn. Sp. Pl.* 345. *Sm. Fl. Brit.* 294. *Huds.* 112? *With.* 286? *Hull ed.* 2. 78.

T. sive Seseli Creticum minus. *Raii Syn. ed.* 2. 102.

T. Narbonense minus. *Dill. in Raii Syn.* 206, with an erroneous place of growth.

Seseli creticum minus. *Ger. em.* 1050.

ALTHOUGH this plant be no longer found about Isleworth, where Mr. Doody observed it in Ray's time, the latter was too accurate a botanist to leave us in any doubt as to its identity, though Dillenius, in his edition of the *Synopsis*, transposed the places of growth of this and *T. maximum*, t. 1173. The latter is the Oxford plant, and was found by the late Mr. Golobed, a few years ago, near Eton.

The present is an annual of more humble growth, whose stem is clothed with fine, dense, soft, deflexed hairs, not rigid bristles. The leaflets are, as Ray says, roundish, not lanceolate, except the uppermost, and grow on long stalks. Flowers white or flesh-coloured; their two outer petals remarkably radiant, one lobe of each being disproportionately large, very different from those of *T. maximum*. The seed moreover has a very elegant, thick, crenate border.

We have of course been obliged to describe an exotic specimen.

2440



TORDYLIUM maximum.

Great Hart-wort.

PENTANDRIA Digynia.

GEN. CHAR. *Invol.* long and undivided. *Corolla* radiant. *Flowers* all hermaphrodite. *Fruit* nearly orbicular, flattened, notched in the margin.

SPEC. CHAR. Umbels dense. Leaflets lanceolate, deeply serrated. Stem rough with bristles bent downwards.

SYN. *Tordylium maximum.* *Linn. Sp. Pl.* 345. *Sm. Fl. Brit.* 295. *With.* 286. *Hull.* 60. *Sibth.* 94. *Dill. in Raii Syn.* 206.

OUR wild specimen of this rare plant was gathered on the north side of Oxford, the only spot in Britain known to produce it; but having been observed there for above a century past, it cannot but be considered as a native. Morison clearly mentions its growing about London; but if Petiver's authority be of any weight, the Isleworth plant must be *T. officinale*. The botanists of his time appear to have found both species; and though it is wonderful any one could confound them, yet Dillenius, in his edition of Ray's *Synopsis*, either has done so, or at least has strangely obscured their history. Trusting to the faithful Ray in his 2d edition for *T. officinale*, I could not but admit both species into the *Flora Britannica*.

T. maximum has a tapering annual root, and flowers from June to August. Stem erect, 3 or 4 feet high, branched, leafy, furrowed, rough with minute rigid bristles pointing downwards. Leaves pinnate, rough; the leaflets of the lowermost broad, lobed and notched; of the rest lanceolate, narrow, coarsely but regularly serrated. Umbels on long solitary rough stalks, opposite to the leaves. General and partial involucra bristle-shaped, rough. Central partial umbels nearly sessile. Flowers white or rose-coloured. Outer petals largest. Seed all over bristly, with a circular thick pale or reddish edge, rugged, but not so beautifully notched as in some other species.



June 1 1893. Published by J. S. Sowerby, London.

CAUCALIS daucoides.

*Small Caulis or Bastard Parsley.**PENTANDRIA Digynia.*

GEN. CHAR. *Corollæ* radiate. *Fruit* nearly oval, striated, rough with rigid bristles. Some flowers abortive.

SPEC. CHAR. General umbels three-cleft, without involucre: partial ones ripening about three seeds, and furnished with a three-leaved involucre.

SYN. *Caucalis daucoides*. *Linn. Syst. Veg. ed. 14.* 276. *Huds. Fl. An.* 112. *With. Bot. Arr.* 271. *Relb. Cant.* 109. *Sibth. Oxon.* 92.

C. leptophylla. *Huds. Fl. An. ed. 1.* 99. *Linn. Sp. Pl. ed. 1.* 242? *ed. 2.* 347.

C. tenuifolia, flosculis subrubentibus. *Raii Syn.* 219.

C. albis floribus. *Ger. em.* 1021.

FOUND, though rarely, in cornfields where the soil is dry and chalky, most plentifully in Cambridgeshire, flowering in the early part of summer.

The root is annual and tapering. Stem branched and divaricated, somewhat zigzag, deeply grooved, a little hairy at the joints only. Leaves three-cleft at their base, then thrice compounded, their segments very narrow, divaricated, pointed, decurrent and smooth, of a pale green. Umbels lateral and terminal, on long footstalks, of scarcely more than 3 rays, though those are sometimes accompanied by 1 or 2 weak and barren ones. General involucre none. Partial umbels of about 5 almost sessile flowers, of which 3 only perfect their seeds, and are accompanied by 3 small lanceolate involucella. Petals nearly equal, generally reddish. Germen and seeds clothed with rigid hooked bristles, intermixed with hairs, but we do not perceive those hairs to be, as Linnæus says, verticillated. That author is singularly confused in his accounts of this genus, nor are we quite sure of what he meant at first by *C. leptophylla*. It is however certain, that the long description of *C. daucoides* in both editions of *Sp. Pl.* belongs to *C. grandiflora*, and not (as erroneously mentioned in *Syst. Veg.*) to *C. platycarpus*, whatever Linnæus might at any time intend by the latter.



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10/10/10

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CAUCALIS latifolia.

*Broad-leaved Caulalis.**PENTANDRIA Digynia.*

GEN. CHAR. *Corollæ* radiate. *Fruit* nearly oval, striated, rough with rigid bristles. Some flowers abortive.

SPEC. CHAR. General umbels three-cleft, with membranous involucre : partial ones ripening about 5 seeds. Leaves pinnated, serrated.

SYN. *Caucalis latifolia.* *Linn. Syst. Veg. ed. 14.* 276. *Huds. Fl. An.* 113. *With. Bot. Arr.* 271. *Relh. Cant.* 110.

C. arvensis echinata latifolia. *Raii Syn.* 219.

Tordylium latifolium. *Linn. Sp. Pl.* 345. *Huds. Fl. An. ed. 1.* 98.

THIS is rather less frequent than the last, but thrives in the same kind of soils and situations. It is one of the most beautiful of umbelliferous plants, and makes a conspicuous appearance in the dry fields of Cambridgeshire in July.

Root annual. Stem taller and less spreading than in *C. daucoides*, but as deeply furrowed, and more rough. Leaves rather glaucous, rough, simply pinnated, serrated ; the lower pair of leaflets sometimes compound at the base. Umbels of rarely more than 3 rays, with a general involucre of 3 or 4 short ovate leaves, ribbed in the middle, with a membranous border. Partial umbels of several nearly sessile flowers, of which about 5 come to perfection. Partial involucre like the general ones. Flowers red, a little radiate. Seeds very rough, with reddish upright straight rough bristles.



CAUCALIS Anthriscus.

Upright Hedge Parsley.

PENTANDRIA Digynia.

GEN. CHAR. *Involucra* general and partial, undivided. *Corollæ* radiate. *Flowers* of the centre male. *Fruit* nearly oval, striated, rough with rigid bristles.

SPEC. CHAR. Umbels of many close rays. General involucre of many leaves. Leaflets pinnatifid. Branches nearly upright.

SYN. *Caucalis Anthriscus.* *Huds.* 114. *Sm. Fl. Brit.* 298. *With.* 288. *Hull.* 59. *Relb.* 111. *Sibth.* 93. *Abbot.* 59. *Curt. Lond. fasc.* 6. t. 22. *C. minor, flosculis rubentibus.* *Raii Syn.* 219. *Tordylium Anthriscus.* *Lin. Sp. Pl.* 346.

LINNÆUS undoubtedly errs in referring this plant to the genus *Tordylium*. Its bristly seeds, abortive flowers, whole structure and habit make it a *Caucalis*; see v. 3. t. 197—199. Few weeds are more general in hedges and the borders of fields. The flowers, which are either white or reddish, are most abundant in July, and the seeds plentiful in August and September. The root is annual and tapering. Stem erect, 2 or 3 feet high, rough with closely depressed bristles, dividing into several nearly upright branches. Leaves alternate, bipinnate, rough; the leaflets opposite, cut and serrated; the terminal one longest. Umbels terminal, erect, of numerous rays, but little spreading, and furnished with a short involucre of several sharp rough entire leaves; the partial involucre is similarly formed. Partial umbels flattish, dense. Flowers radiant (or irregular), though in no great degree. Fruit small, rough, with simple incurved bristles, its summit tinged with purple.

This *Caucalis* is neither noxious, nor remarkable for any properties of known utility.

987



[1314]

CAUCALIS infesta.
Spreading Hedge Parsley.

PENTANDRIA Digynia.

GEN. CHAR. *Involucra* general and partial, undivided. *Corollæ* radiate. *Flowers* of the centre male. *Fruit* nearly oval, striated, rough with rigid bristles.

SPEC. CHAR. Umbels of many close rays. General involucre little or none. Leaflets pinnatifid. Branches spreading.

SYN. *Caucalis infesta.* *Curt. Lond. fasc. 6. t. 23. Sm. Fl. Brit. 299. Relh. 108.*

C. arvensis. *Huds. 113. With. 288. Hull. 59. Sibth. 92. Abbot. 58.*

C. segetum minor, Anthriscus hispido similis. Raii Syn. 220.

Scandix infesta. Linn. Syst. Nat. ed. 12. v. 2. 732.

THIS is closely allied to the *Caucalis Anthriscus*, t. 967, and, like that, is most unquestionably a *Caucalis*. It is very common in fields and by way sides, flowering in July, and the seeds are widely dispersed by adhering to the coats of animals, or any thing else that comes in their way.

Root annual, tapering. Stem a foot or two in height, erect, leafy, round, furrowed, rough, dividing into numerous alternate divaricating branches. Leaves alternate, pinnate, deeply cut and sometimes almost bipinnate, rough; the terminal leaflet elongated. Umbels terminal, erect, of numerous close rays. General involucre either of 1 simple leaf, or entirely wanting; partial of several sharp rough leaves. Flowers somewhat radiant, white, cream-coloured, or rarely flesh-coloured. *Antheræ* yellowish or purple. Fruit larger than in *C. Anthriscus*, ovate, rough, green or reddish, but not tipped with purple. The most certain distinction of this species is the want of a many-leaved involucre, and also the divaricated branches.



CAUCALIS nodosa.

*Knotted Caulis.**PENTANDRIA Digynia.*

GEN. CHAR. *Corollæ* radiate. *Fruit* nearly oval, striated, rough with rigid bristles. Some flowers abortive.

SPEC. CHAR. Umbels lateral, simple, nearly sessile.

SYN. *Caucalis nodosa*. *Huds. Fl. An.* 114. *With. Bot.*

Arr. 273. *Relb. Cant.* 111. *Sibth. Oxon.* 93.

C. nodosa echinato semine. *Raii Syn.* 220.

Tordylium nodosum. *Linn. Sp. Pl.* 346.

COMMON on banks and about the borders of fields, especially on a gravelly or calcareous soil, flowering from May to July, after which its dry stalks and heads of seeds remain for a considerable time, and become bleached at length by the weather.

Root annual. Stems prostrate, branched, leafy, striated, roughish with reflexed hairs. Leaves bipinnate, and sharply cut; opposite to each of which, and often partly embraced by its sheathing footstalk, stands a small simple umbel of several minute, white or reddish, scarcely radiating, flowers, each on a very short flowerstalk, and surrounded by linear hairy involucre. The germens and seeds, both in the Linnæan specimens and in ours, are all rough, the inner ones with warty points, the outermost, and especially on their outside, with longish, straight, rough, rigid hairs, as in other species of *Caucalis*, to which genus (and not to *Tordylium*) this plant is surely to be referred upon that account, whether it has any abortive flowers or not. Future observations must decide whether the smoother seeds of the centre are ever really abortive, or destitute of a vegetative principle. Practical observers of nature in the country have it in their power to clear up many points of this kind, relative to the most common plants, which, if communicated from time to time to those who have the means of making them public, would materially advance the interests of science.



"Gonolobus" R. & P. 199

[1174]

DAUCUS Carota.

Wild Carrot.

PENTANDRIA Digynia.

GEN. CHAR. *Invol.* pinnatifid. *Corolla* somewhat radiant. *Fruit* rough.

SPEC. CHAR. *Fruit* bristly. *Footstalks* ribbed on the under side. *Segments* of the leaves acute.

SYN. *Daucus Carota.* *Linn. Sp. Pl.* 348. *Sm. Fl. Brit.* 300. *With.* 289. *Hull.* 59. *Relh.* 109. *Sibth.* 93. *Abbot.* 59. *Woodv. Med. Bot. t.* 161. *Mart. Rust. t.* 82.

D. vulgaris. *Raii Syn.* 218.

Caucalis Carota. *Huds.* 114.

COMMON in pastures, and especially about the borders of fields, flowering in June and July.

Root biennial, tapering, yellow, remarkable for a peculiar sweetish aromatic flavour, of which the whole herb partakes. Stem upright, solitary, branched and spreading, round, furrowed, more or less bristly. Leaves twice or thrice pinnate; their segments sharply cut, narrow and hairy; their common footstalks ribbed beneath. The umbels grow on long naked stalks, and consist of a great number of roughish rays, the outermost of which spread very much, and are a great deal longer than the inner ones, so that the upper surface of the whole umbel, when in blossom, is flat, but afterwards by contraction of the rays it becomes concave like a bird's nest. The general involucre are deeply pinnatifid and linear; the partial ones either simple or three-cleft. Flowers radiant, cream-coloured, but the central abortive floret is remarkable for its, more or less deep, blood-red hue. The angles of the seeds are fringed with small divaricated bristles.

This is the origin of the Garden Carrot. We are now almost persuaded that the *Daucus maritimus*, the segments of whose leaves are broad, obtuse and fleshy, may be a distinct species.



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DAUCUS maritimus.*Sea-coast Carrot,*

PENTANDRIA Digynia.

GEN. CHAR. *Invol.* pinnatifid. *Corolla* somewhat radiant. *Fruit* rough.

SPEC. CHAR. Fruit armed with compressed teeth. Leaflets dilated, succulent, hairy, with rounded segments. Umbels convex when in seed.

SYN. *Daucus maritimus.* *With.* 290.

D. Carota γ, *Sm. Fl. Brit.* 300. *Hull. ed.* 2. 79.

NATIVE of the coast of Cornwall, where Dr. Withering first observed it; and his friend the Rev. Mr. Thompson of Penzance, by many subsequent remarks, confirmed him in the idea, in which we now concur, of its being a species distinct from *D. Carota*, t. 1174.

The root is of a dirty white, we presume biennial. Stem scarcely above 18 inches high, woolly rather than hairy, branched, leafy. Leaves also rather woolly; their leaflets broad and succulent, with rounded segments. Umbels white, sometimes slightly reddish, convex and often globose when in flower, nor are they flat, much less concave, when in seed. The fruit is armed with flattened teeth, dilated at the base, approaching to the nature of what are found in the exotic *D. mauritanicus* and *muricatus*, not like the bristles of *D. Carota*. The central, abortive, red or purple flower is not found in *D. maritimus*. This species flowers in July and August.



BUNIAM flexuosum.

*Common Earth-nut.**PENTANDRIA Digynia.*

GEN. CHAR. *Involucra* general and partial. *Corolla* uniform. *Umbels* dense. *Fruit* ovate.

SPEC. CHAR. General involucre of scarcely three leaves. Stem at the base tapering, zigzag, and naked.

SYN. *Bunium flexuosum.* *With.* 291. *Sm. Fl. Brit.* 301. *Sym.* 70. *Hull.* 60. *Sibtb.* 94. *Abbot.* 60.

B. Bulbocastanum. *Huds.* 122. *Relb.* 118. *Curt. Lond. fasc.* 4. *t.* 24.

Bulbocastanum. *Raii Syn.* 209.

A WELL-KNOWN inhabitant of gravelly pastures, whose white flowers are conspicuous throughout the month of June, and whose roundish fleshy roots are eagerly sought by boys; less perhaps for the sake of their sweetish pungent flavour, than for the amusement of tracing them to their deep situation by means of the slender tapering and tender basis of the stem. If this clue be lost, it is not easily recovered.

These roots are perennial. Stem about a foot high, smooth, branched and leafy upward. Leaves tripinnate, with narrow linear uniform segments, smooth, bright green; the radical ones on long taper zigzag stalks. Umbels terminal, erect, of many rays. General involucre of one to three small linear leaves, often altogether wanting; partial of several such leaves. Petals regular. Fruit ovate, smooth, tipped with purple.

Although Linnæus confounded this with the *Bulbocastanum majus* of old authors, the latter appears to be what he had before him when describing his *Bunium Bulbocastanum*, and is a very rare plant with us. Dillenius in Ray's *Synopsis*, 209, has mentioned both, and Dr. Stokes has well distinguished them in the 2d edition of *Withering*.



Feb. 1. 1860. Zanthoxylum

CONIUM maculatum.

Common Hemlock.

PENTANDRIA Digynia.

GEN. CHAR. *Partial involucra* of about 3 leaves, all on one side. *Fruit* ovate, swelling, with 5 ribs on each side, which are waved before the seed is ripe. *Petals* uniform.

SPEC. CHAR. Seeds without prickles. Stem much branched, polished and spotted.

SYN. *Conium maculatum.* *Linn. Sp. Pl.* 349. *Sm. Fl. Brit.* 302. *Huds.* 115. *With.* 292. *Hull.* 60. *Relh.* 110. *Sibth.* 94. *Abbot.* 60. *Curt. Lond. fasc.* 1. *t.* 17. *Woodv. Med. Bot.* *t.* 22. *Cicuta. Raii Syn.* 215.

HEMLOCK grows very generally on banks, dunghills and waste ground, and every body is supposed to know it; yet various things are often mistaken for it, and such mistakes are not unimportant when they regard medicinal plants. The smooth shining spotted stem should be particularly attended to, as well as the shape of the fruit. It is also worthy the notice of herb-gatherers in general, that, with respect to *umbelliferous plants*, the most fatal are such as grow in watery places. Hemlock is one of the most active of those found on dry ground; yet it is too nauseous to be swallowed in any dangerous quantity. Its virtues in a proper dose are narcotic and sedative.

The root is fleshy, biennial. The flowers appear in June and July, and the tall upright hollow stem, with its spreading branches laden with umbels of seeds, is conspicuous about hedges in autumn. Leaves repeatedly pinnate and sharply notched, of a deep shining green, foetid when bruised. Flowers white. General involucre of several short ovate leaves; partial of 3 or 4 narrower ones all placed on one side of the partial umbel. Petals curved inwards, all nearly of equal size. Fruit ovate, furrowed, smooth.



July 2. 1860. Published by J. J. ...

SELINUM palustre.

*Marsh Milky Parsley.**PENTANDRIA Digynia.*

GEN. CHAR. *Fruit* oval-oblong, compressed, striated down the middle. *Involucra* general and partial, reflexed. *Petals* heart-shaped, uniform.

SPEC. CHAR. Milky. Root generally single. Stem solitary. Styles much divaricated after flowering. Petals involute.

SYN. *Selinum palustre.* Linn. *Sp. Pl.* 350. Hudf. *Fl. An.* 115. With. *Bot. Arr.* 281.

GATHERED by Dr. Smith July 28, 1794, in the ditches of a very wet reedy meadow between Norwich and Heigham, where it was first observed by Mr. Pitchford. Ray seems not to have known this plant to be a native of England.

Root somewhat spindle-shaped, with several fibres from the top. Stem solitary, erect, four or five feet high, hollow, deeply furrowed, not hairy, bright purple at the base, bearing five or six remote alternate leaves; the lowermost on long furrowed footstalks, with sheathing reddish stipulæ, and all twice or thrice oppositely pinnated, and cut into narrow, pointed, opposite or alternate, smooth segments, of which the terminal ones are longest. The upper part of the stem is alternately branched, in a corymbose manner, bearing many large, horizontal, compound umbels of white flowers, on pale purplish footstalks. Involucra of several shortish, dependent, lanceolate, pointed leaves, with membranous edges. Petals uniform, inflexed. Fruit elliptical, sharp edged.

The whole plant abounds with a white, bitter, foetid juice, of the consistence of cream, which soon dries to a brownish resin. The Russians are said to use the root instead of ginger.

Dr. Stokes justly remarks (*Bot. Arr.*) that Jacquin's *Selinum sylvestre*, figured in *Flo. Austriaca*, is this plant, and not the *sylvestre* of Linnæus. This we have verified by comparing original specimens. In both however the stem is furrowed. The difference of one having a solitary stem, the other a great number, seems more certain than the difference of the roots.



ATHAMANTA Libanotis.
Mountain Stone-Parsley.

PENTANDRIA Digynia.

GEN. CHAR. *Fruit* ovato-oblong, convex, striated.
Petals uniform, inflexed, so as to seem notched.
Involucrum both general and partial.

SPEC. CHAR. Leaves bipinnated, flat. Umbels hemispherical. Seeds hairy.

SYN. *Athamanta Libanotis.* *Linn. Sp. Pl.* 351.
Relb. Cant. 113 fig. *With. Bot. Arr.* 283. *Hudsf. Fl. An. ed.* 1. 100.

A. Oreoselinum. *Hudsf. Fl. An.* 115. *With. Bot. Arr.* 283.

Apium petræum seu montanum album. *Raii Syn.* 218.

IN the time of Ray, this plant was known to grow wild on Gogmagog hills, Cambridgeshire; but from that period no botanist has met with it there till the year 1783, when it was detected by the Rev. Mr. Relhan, to whom we are obliged for the wild specimen here represented. Whether the plant Mr. Hudson gathered between St. Albans and Stoney Stratford be the same, we have no means of determining: probably it might. That gentleman rightly referred Ray's plant to the *A. Libanotis* in his first edition; but in the second, misled as it should seem by Linnæus in *Sp. Pl.* he calls it *A. Oreoselinum*, a very different species, as appears from the *Linn. Herb.* Hence arose the mistake of Dr. Withering, who has both plants in his *Bot. Arr.*

The root is perennial, running perpendicularly down, somewhat woody, bitterish, and pungent, bearded at the top with the fibrous remains of old leaf-stalks. Stem one or two feet high, erect, little branched, smooth, angular, and (as Ray observes) often very deeply furrowed. Leaves bipinnate: leaflets sessile, pinnatifid, with pointed entire lobes, firm, veiny, paler beneath, smooth, except a slight hairiness on the veins and margin. Footstalks dilated at the base, with a membranous border. Umbels terminal, erect, whitish. Involucra numerous, subulate, with a membranous margin, hairy. Flower-stalks, calyx, and germen, hairy, as is likewise the fruit. After flowering, the styles and top of the germen become purple, as Linnæus remarks. The umbels are sometimes proliferous. This plant blooms copiously in August. We have represented a magnified flower to shew the inflexion of the petals, and the half-ripe fruit with its purple divaricated styles.



78.
[1767]

PEUCEDANUM officinale.

Sea Sulphur-wort.

PENTANDRIA Digynia.

GEN. CHAR. *Fruit* ovate, compressed, striated on both sides, encompassed with a border. *Cal.* of 5 teeth. *General Involucrum* very short. *Flowers* of the disk abortive.

SPEC. CHAR. Leaves five times deeply three-cleft; leaflets linear, undivided.

SYN. *Peucedanum officinale.* *Linn. Sp. Pl.* 353. *Sm. Fl. Brit.* 304. *Huds.* 116. *With.* 294. *Hull.* 60. *Peucedanum.* *Raii Syn.* 206.

ONE of our rarest umbelliferous plants, found in salt marshes and ditches, chiefly in the south-east quarter of the kingdom. Our specimen was obligingly communicated by Mr. Crow of Feversham, who gathered it at Hearn, 6 miles from Whitstable, on a cliff by the sea-side, in full flower September 22d 1806, when it was already out of flower by the river side below Feversham; in which last place it grew in Sherard's time, and was also observed by Mr. Lightfoot in 1775.

The whole plant is smooth, and has a strong sulphureous smell, especially the root, which is perennial, tap-shaped, very resinous and foetid, and reported to be useful in coughs, in obstructions of the viscera, and in nervous disorders. Its powers, whatever they may be, are certainly of no feeble kind; but they should be cautiously explored. Stem near a yard high, erect, round, striated, branched, leafy, tough. Leaves narrow and rigid, divided 5 or 6 times successively into 3 deep divisions, the ultimate lobes flattish, linear, acute, entire. Umbels large, of a great number of rays, concave. General involucrum of a few short bristle-shaped leaves; partial of several still narrower ones, about half as long as the partial rays, which are quite capillary, but rigid. Petals yellow, equal, incurved. Calyx-teeth acute, inflexed. Styles recurved. Fruit tawny, broad, flat, furrowed on each side.



PEUCEDANUM Silaus.

*Meadow Sulphur-wort.**PENTANDRIA Digynia.*

GEN. CHAR. *Fruit* ovate, compressed, striated on both sides, encompassed with a border. *Cal.* of 5 teeth. *General Involucrum* very short. *Flowers* of the disk abortive.

SPEC. CHAR. Leaflets pinnatifid; their segments opposite, decurrent. General involucrum of barely two leaves.

SYN. *Peucedanum* Silaus. *Linn. Sp. Pl.* 354. *Sm. Fl. Brit.* 305. *Huds.* 116. *With.* 294. *Hull.* 60. ed. 2. 80. *Relh.* 111. *Sibth.* 95. *Abbot.* 60. *Jacq. Austr. t.* 15. *Mart. Rust. t.* 128.

Seseli pratense nostras. Raii Syn. 216.

NOT unfrequent in meadows, or rather moist pastures, flowering from July to September.

Root tap-shaped, perennial. Whole plant smooth, from 1 to 2 feet high, of a darkish green, foetid when bruised, and supposed, in some parts of Norfolk, to give a bad flavour to milk and butter, though Schreber and Martyn observe that cattle do not appear in general to eat it. Stem round, furrowed, branched, leafy, tough. Leaves variously compounded and divided, with sharp, decurrent, undivided or pinnatifid, opposite leaflets. Umbels rigid, their outer rays longest. General involucrum of 1 or 2 short leaves; partial of several longer ones. Flowers of a yellow or greenish hue, with purple anthers and pistils. Calyx-teeth scarcely discernible. Petals keeled, inflexed. Germen composed of 2 ribbed hemispheres. Fruit more ovate, and at length oblong, scarcely bordered, so that it answers but imperfectly to the generic character, though its habit and sensible qualities agree tolerably with others of this genus.



CRITHMUM maritimum.

*Sea Sampire.**PENTANDRIA Digynia.*

GEN. CHAR. *Involucra* general and partial. *Fruit* oval, compressed, striated. *Flowers* regular. *Cal.* entire.

SPEC. CHAR. Leaflets lanceolate, fleshy.

SYN. *Crithmum maritimum.* *Linn. Sp. Pl.* 354. *Sm. Fl. Brit.* 306. *Huds.* 117. *With.* 295. *Hull.* 82. *Dicks. H. Sicc. fasc.* 12. 16.

C. marinum. *Raii Syn.* 217.

FOR this classical specimen of an English plant by no means generally known, we are obliged to L.-W. Dillwyn, Esq. F.L.S. who gathered it on the very cliff at Dover so finely described by Shakspeare in his *King Lear* :

———“ Half way down

Hangs one that gathers Sampire ; dreadful trade !”

It is not uncommon in similar situations ; but the more universal *Salicornia* has not only usurped its English name *Sampire*, (or rather *Sampire*, as it is a corruption of the French *Saint Pierre*), but almost supplanted it at our tables as a pickle, though totally deficient in the aromatic flavour which is the recommendation of the *Crithmum*.

The long perennial branching roots run deep into fissures of rocks. The herb is bushy and succulent, particularly its leaves, which are twice or thrice ternate, entire and almost linear, very unlike those of any other British umbelliferous plant ; their colour a little glaucous. Umbels dense, hemispherical. General and partial involucra small, ovate, undivided. Flowers greenish-white, all regular and fertile. Their petals incurved, broad at the base ; whereas in most of this tribe the petals are furnished with claws. Fruit elliptical, furrowed, fleshy, smooth.



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HERACLEUM Sphondylium.

*Common Cow Parsnep.**PENTANDRIA Digynia.*

GEN. CHAR. *Fruit* elliptical, notched, compressed, striated, dilated in the margin. *Flowers* radiant. *Petals* notched, with an inflexed point. *General Involucrum* deciduous.

SPEC. CHAR. Leaves pinnate: leaflets pinnatifid, cut and serrated.

SYN. *Heracleum Sphondylium.* *Linn. Sp. Pl.* 358. *Sm. Fl. Brit.* 307. *Huds.* 117. *Witb.* 295. *Hull.* 58. *Relb.* 114. *Sibth.* 95. *Abbot.* 61.

Sphondylium. *Raii Syn.* 205.

EVERY one knows the Cow Parsnep, the largest and most conspicuous of our common umbelliferous plants, whose tall stems and great white or reddish umbels are to be seen throughout the month of July by road-sides, in thickets, groves, borders of fields, and even meadows.

The root is biennial, tap-shaped. Stem erect, branched, leafy, stout, hollow, furrowed and rough, mostly 4 feet high. Leaves large, ternate or pinnate, variously pinnatifid, cut and serrated, downy beneath; their common stalk furnished with one large inflated ribbed stipula. Umbels flattish, of many rays. General and partial involucre of several lanceolate sharp leaves, the former in particular soon falling off. Petals unequal, inversely heart-shaped with an inflexed tooth between the lobes, a circumstance common to many flowers of this natural order, but in none more conspicuous than in the outermost petals of the present plant. Fruit elliptical, broad and flat, smooth, with 3 ribs on each side.

We are authorized to say that the *H. angustifolium* of all British writers is merely a narrow-leaved variety of this, sometimes growing from the same root, as Mr. Woodward first remarked. It has been suspected that Professor Jacquin has made too many species in this genus; and it is necessary here to add that even the *H. angustifolium* of *Fl. Brit.* proves on examination to be different from the Linnæan plant to which it was, on the faith of two most excellent botanists, referred, and to which the description in *Fl. Brit.* belongs.



MEUM athamanticum.
Spignel, Meu, or Bald-money.

PENTANDRIA Digynia.

GEN. CHAR. *Fruit* elliptic-oblong, with 3 ribs on each side. *Invol.* somewhat cut; the general one often abortive; the partial halved. *Petals* inflexed, entire. *Calyx* obsolete.

SPEC. CHAR. Leaflets all in numerous, deep, bristle-like segments.

SYN. *Meum* athamanticum. *Jacq. Austr.* v. 4. 2. t. 303. *Sm. Fl. Brit.* 308. *Hull. ed.* 2. 81.

Meum. *Raii Syn.* 207. *Ger. em.* 1052.

Athamanta Meum. *Linn. Sp. Pl.* 353. *Huds.* 116. *Dicks. H. Sicc. fasc.* 11. 7.

Æthusa Meum. *Linn. Syst. Veg. ed.* 14. 287. *With.* 305.

NATIVE of mountainous pastures in Westmoreland, Lancashire, the north of Yorkshire, and Merionethshire, as well as in Scotland, from which last country Lady Wilson favoured us with this specimen. It flowers in May.

The root is perennial, thick and woody, very aromatic, crowned with the fibrous remains of old leafstalks. Stem but little branched, about a span high when in blossom, but twice as tall in seed. Leaves dark green, doubly pinnate, their segments numerous and singularly delicate, smooth. Footstalks dilated into a broad, concave, ribbed stipula. Flowers numerous, uniform, cream-coloured, or reddish. General involucre of a few linear or lanceolate leaves, mostly 3-cleft, often wanting; partial of rather more, either entire or cut. Calyx scarcely discernible. Fruit slightly compressed, with 3 acute ribs to each side. Possibly this plant, about whose genus there have been such various opinions, might without violence be referred to *Ligusticum*.

Miss Watson, of Delvine house, Angusshire, has informed Mr. Sowerby that where this herb abounds in the Highlands, the milk and butter partake of its peculiar melilot-like taste in the spring; and that a pretty strong infusion of it gives cheese the flavour of the Swiss *Chapziegar*, so as hardly to be distinguished from that brought from abroad. As the *Meum* disappears wherever the land has been ploughed, it daily grows more scarce in Scotland.



LIGUSTICUM scoticum.

*Scottish Lovage.**PENTANDRIA Digynia.*

GEN. CHAR. *Invol.* general and partial. *Fruit* oblong, with 3 ribs on each side. *Corolla* uniform. *Petals* rolled in, entire. *Cal.* of 5 teeth.

SPEC. CHAR. Leaves twice ternate.

SYN. *Ligusticum scoticum.* *Linn. Sp. Pl.* 359. *Sm. Fl. Brit.* 309. *Huds.* 117. *With.* 296. *Hull.* 62. *Lightf.* 159. *Fl. Dan. t.* 207.

L. Scoticum, apii folio. *Raii Syn.* 214.

FOR wild specimens of this rare plant we are obliged to our worthy friend Alexander M'Leay, Esq. Secretary to the Linnean Society, who gathered them among rocks on the shore near Wick in Caithness, the northern extremity of Britain, in August last. We have formerly observed the same about the Frith of Forth, and Lightfoot mentions it as frequent on the shores of the Western Islands. In Skye it is called *Shonis*, and is eaten both in a crude and boiled state. We suspect our southern epicures would not thank us for its introduction among them, the whole plant, though aromatic, being highly acrid, and to our taste nauseous in a great degree.

The root is tap-shaped, very warm and pungent. Stem upright, leafy, a little branched at the top, striated, smooth. Leaves alternate, doubly ternate, the uppermost only simply so; the leaflets broad, somewhat rhomboid, acute, fleshy, smooth, dark-green; entire at the base, deeply serrated in the upper part. Common footstalk winged at the base, mostly purplish. Umbels terminal, large, erect, smooth. General involucre of 4 or 5 lanceolate leaves; partial of several smaller ones. Petals regular, slightly reddish. Fruit longer and more distinctly winged than in *L. cornubiense*, t. 683.



LIGUSTICUM cornubiense.

*Cornish Lovage.**PENTANDRIA Digynia.*

GEN. CHAR. *Invol.* general and partial. *Fruit* oblong, with 3 ribs on each side. *Corollæ* uniform. *Petals* rolled in, entire. *Cal.* of 5 teeth.

SPEC. CHAR. Radical leaves twice compound, cut; stem leaves ternate, lanceolate, entire. Furrows of the seeds obsolete.

SYN. *Ligusticum cornubiense.* *Linn. Sp. Pl.* 359. *Sm. Ic. pict.* t. 11. *Fl. Brit.* 310. *Huds.* 118. *With.* 297. *Hull.* 62.

Smyrnum tenuifolium nostras. *Dill. in Raii Syn.* 209. t. 8.

IT is remarkable that this plant has never been found in any part of the world except Cornwall, where a Mr. Steevens discovered it early in the present century. From that time till about ten years ago it was supposed to be lost, or that something had been mistaken for it; but Mr. Pennington fortunately found it again about Bodmin, where Mr. D. Turner and Mr. Sowerby gathered this wild specimen. It is perennial, flowering in July, and grows in bushy fields, owing its preservation from cattle, who, according to Dr. Withering's observation, are very fond of it, to the surrounding thorns and briars.

Root tapering, discharging a yellow resinous juice. Stem about 2 feet high, erect, branched, round, striated, roughish, not very leafy, purple at the base. Leaves deep green, the radical ones on foot-stalks, twice or thrice ternate, broader than they are long, their leaflets wedge-shaped and cut, rough only on the nerves and margin; those on the stem (which Linnæus, mistaking Dillenius's figure, took for the lowest radical leaves) consist of three lanceolate entire leaflets; and the uppermost of all are simple. Umbels of many rays, smooth. Involucrum of about 8 shortish linear leaves; the partial ones being like it in form, but smaller. Flowers white, uniform, and nearly regular; the sharp points of their petals rolled in. Fruit ovato-oblong, striated on each side, the ribs not very prominent. Seeds ovate, black.



ANGELICA Archangelica.
Garden Angelica.

PENTANDRIA Digynia.

GEN. CHAR. *Involucra* general and partial. *Fruit* roundish, solid, with 3 wings on each side. *Cal.* with 5 teeth. *Flowers* regular. *Petals* incurved. *Styles* reflexed.

SPEC. CHAR. Terminal leaflet lobed.

SYN. *Angelica Archangelica.* *Linn. Sp. Pl.* 360.
Sm. Fl. Brit. 311. *With.* 297. *Hull. ed.* 2. 81.
Woodv. Med. Bot. t. 50.

A. sativa. *Ger. em.* 999. *Dill. in Raii Syn.* 208.

THE present species of *Angelica* was admitted into the *Flora Britannica* on the authority of Dr. Withering, who found it at Broadmoore, about seven miles north-west from Birmingham. Its natural station we believe to be alpine, and, like some other truly alpine plants, it thrives luxuriantly in the closest parts of London. Being commonly cultivated for the sake of the stalks, which when candied make an agreeable sweetmeat, no wonder that it is in some degree naturalized about Battersea, and similar places. It flowers at various seasons; most naturally early in summer, the large, white, resinous root being biennial.

The stem is upright, four or five feet high, round, smooth, leafy, hollow, striated, somewhat glaucous. Leaves ternate, then pinnate; leaflets ovato-lanceolate, acute, smooth, cut and serrated, the odd one three-lobed. Their common footstalk is remarkably dilated and tumid, clasping the stem. Umbels globose, green, of many rays. General involucre of a few linear deciduous leaves, often wanting; partial of about eight short linear-lanceolate ones, which occasionally become very large, and serrated. Calyx minute. Petals ovate, inflexed, pale green. Fruit somewhat elliptical, compressed, sharply ribbed. The whole herb has a pungent aromatic flavour, too strong to be pleasant, except when modified by culinary art.



As compiled by J. H. Sargent

ANGELICA sylvestris.

Wild Angelica.

PENTANDRIA Digynia.

GEN. CHAR. *Involucra* general and partial. *Fruit* roundish, solid, with 3 wings on each side. *Cal.* 5 teeth. *Flowers* regular. *Pet.* incurved. *Styles* reflexed.

SPEC. CHAR. Leaflets equal, ovate, serrated.

SYN. *Angelica sylvestris.* *Linn. Sp. Pl.* 361. *Sm. Fl. Brit.* 311. *Huds.* 118. *With.* 298. *Hull.* 62. *Relb.* 112. *Sibth.* 96. *Abbot.* 61. *Woodv. Suppl. t.* 265. *Raii Syn.* 208.

COMMON in watery places about the banks of rivers and ditches, other grounds, alder groves, &c. flowering in July, when its tall purplish-glaucous stem, bearing large dense umbels on its divaricated branches, is seen rising above the surrounding coarse grasses, willow-herbs and water-mints, among which the broad spreading leaves of the Angelica are no less conspicuous.

The root is perennial, large and fleshy. Stem round, smooth, branched, leafy. Leaves bipinnate, rather glaucous, composed of distinct, ovate or elliptical, sharply serrated leaflets, of which the lowermost lateral ones are often lobed or auricled. Umbels of many rays, dense, hemispherical. Involucrum of 1 or 2 very narrow sharp leaves; partial involucre of many similar ones; all of them downy as well as the stalks. Flowers regular, small, white or purplish. Styles purple, short till after the flowers are faded, when they become reflexed. Fruit small, smooth. The general involucrum is often wanting.

This whole plant is aromatic, bitter and pungent; but the garden Angelica is now generally preferred for medical purposes, and always for culinary ones. Both plants are eminently stomachic and carminative.



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S I U M latifolium.

*Broad-leaved Water Parsnep.**PENTANDRIA Digynia.*

GEN. CHAR. *Fruit* nearly oval, compressed, striated.
Involucrum general and partial, of many leaves.
Petals heart-shaped, uniform.

SPEC. CHAR. Leaves pinnated; leaflets oblong-lanceolate, equally serrated. Umbels terminal.

SYN. *Sium latifolium.* *Linn. Sp. Pl.* 361. *Huds. Fl. An.* 118. *Witb. Bot. Arr.* 291. *Relb. Cant.* 115. *Sibth. Oxon.* 96.

S. latifolium foliis variis. *Raii Syn.* 211.

SENT by Mr. Woodward from Norfolk, where it is not uncommon, nor is it of very rare occurrence in rivers and fens throughout England; but the umbelliferous tribe has been more overlooked than most others, except Cryptogamia. This is one of the largest British plants of that tribe. Its perennial root, creeping among mud and gravel, throws up round, hollow, deeply furrowed stems 4 or 5 feet in height, clothed with alternate leaves, composed of 7 or 9 leaflets, which vary much in breadth, but are always very equally and neatly serrated, in which respect they differ materially from *S. angustifolium*, as well as in being much longer. Mr. Hudson well remarks, that such as grow under water are often lacinated. The umbels are terminal, large, and many-flowered. Involucra various in size and figure, sometimes lobed and often serrated. Seeds small.

It is a plant of an acrid poisonous quality, particularly the roots.



186. 11. 1. 989

S I U M angustifolium.

*Narrow-leaved Water Parsnep.**PENTANDRIA Digynia.*

GEN. CHAR. *Fruit* nearly oval, compressed, striated.
Involucrum general and partial, of many leaves.
Petals heart-shaped, uniform.

SPEC. CHAR. Leaves pinnated; leaflets irregularly lobed and serrated. Umbels on foot-stalks opposite to the leaves. Stem erect.

SYN. *Sium angustifolium.* *Linn. Sp. Pl.* 1672. *Huds. Fl. An.* 119. *Witb. Bot. Arr.* 292. *Relb. Cant.* 116.

S. erectum. *Huds. Fl. An. ed. 1.* 103.

S. five Apium palustre, foliis oblongis. *Raii Syn.* 211.

THIS is frequently found in ditches and rivulets, and, having been originally considered by Linnæus as a variety of *S. latifolium*, was first established as a distinct species by Mr. Hudson. The Rev. Mr. Relhan sent this specimen from near Cambridge. It flowers in July and August.

Root perennial, creeping, so as to occupy much space. Stem upright, with whorls of radical fibres in its lower part under water, round, striated, smooth, much branched above. Leaves alternate, simply pinnated; leaflets sessile, the lowermost pair remote from the rest, and smaller, at least in the lower leaves, in which also the leaflets are obliquely heart-shaped at the base; otherwise they are lanceolate, often so deeply lobed as to become hastate, pointed, very irregularly and sharply serrated, and very smooth. The umbels stand solitary, opposite to each leaf, on divaricated footstalks somewhat shorter than the adjoining leaf. General involucrum of many drooping leaves, which are occasionally entire, serrated or pinnatifid; the partial ones are oval and more entire. Calyx of five minute teeth. Petals heart-shaped, with an inflexed claw from the sinus, all uniform. Stamina twice as long as the corolla, spreading. Fruit smooth, slightly ribbed, oval.



S I U M nodiflorum.

Procumbent Water Parsnep.

P E N T A N D R I A Digynia.

GEN. CHAR. *Fruit* nearly oval, compressed, striated.
Involucrum general and partial, of many leaves.
Petals heart-shaped, uniform.

SPEC. CHAR. Leaves pinnated ; leaflets ovate, equally serrated. Umbels sessile, opposite to the leaves.
Stem procumbent.

SYN. *Sium nodiflorum.* *Linm. Sp. Pl.* 361. *Huds.* 119. *Witb.* 299. *Hull.* 61. *Relb.* 116. *Sibth.* 96. *Abbot.* 62. *Woodv. Med. Bot.* t. 182.

S. umbellatum repens. *Raii Syn.* 211.

FREQUENT in ditches and rivulets, as in St. George's Fields and similar situations, flowering about July and August.

Root perennial, creeping. Stems procumbent or floating, often creeping, various in length, branched, round, hollow, slightly striated, smooth, leafy. Leaves pinnate, of from five to nine sessile ovate leaflets, which are all neatly and equally serrated, the odd one largest, and sometimes united with the neighbouring pair. Umbels lateral, opposite to the leaves, solitary, nearly sessile, each of about 5 or 7 divaricated rays bearing little umbels of 12 or more flowers. General involucrum of but one leaf, and often entirely wanting. Partial of several ovate concave leaves as long as the partial flower-stalks. Flowers small, greenish-white, with slight traces of a calyx. Fruit ovate.

This plant has been recommended in cutaneous disorders, and on that account has been admitted into the London Pharmacopœia and Dr. Woodville's valuable work. Dr. Withering prescribes 3 large spoonfuls of the juice twice a day in milk. It cannot be confounded with *S. angustifolium* (see t. 139), as in that the stem is erect, leaves unequally cut, umbels on long flower-stalks, with a general involucrum of many leaves.

Pl. Dan. t. 247. is certainly *S. angustifolium*, not *nodiflorum*.

639.



SIUM repens.
Creeping Water Parsnep.

PENTANDRIA Digynia.

GEN. CHAR. *Fruit* nearly oval, compressed, striated.
Involucrum general and partial, of many leaves.
Petals heart-shaped, uniform.

SPEC. CHAR. Leaves pinnated; leaflets roundish, deeply toothed. Umbels on stalks, opposite to the leaves. Stem creeping.

SYN. *Sium repens*. *Linn. Suppl.* 181. *Sm. Fl. Brit.* 314.
With. 300. *Hull.* 61. *Relh.* 114. *Sibth.* 97.
Abbot. 63. *Jacq. Fl. Austr. t.* 260.

PROBABLY this species may have been overlooked by former botanists as a small variety of *Sium nodiflorum*, see *v. 9. t. 639*, till Jacquin described it in his valuable *Flora Austriaca*. Since he observed it, many others have recognized it in various places. Our specimens were sent from near Edinburgh by the late Mr. Mackay. It flowers in July and August, and is perennial, growing in moist boggy meadows, but not in ditches.

The stems are quite prostrate, creeping by means of several radicles. Leaves formed of a few roundish or wedge-shaped leaflets, the odd one generally three-lobed; all coarsely and bluntly toothed, not regularly serrated as in other species. Umbels on considerable stalks opposite to each leaf, and formed of a few divaricated partial umbels, composed of numerous white flowers. General and partial involucrum of several ovate, ribbed, spreading leaves. Calyx scarcely perceptible. Fruit small, roundish. Antheræ yellow.



Fig. 32. Ranunculus acris L.

S I S O N verticillatum.

Whorled Honewort.

PENTANDRIA Digynia.

GEN. CHAR. *Fruit* oval, striated. *Involucra* both general and partial, each of about 4 leaves.

SPEC. CHAR. Leaflets in capillary, whorled segments.

SYN. *Sison verticillatum.* *Linn. Sp. Pl.* 363. *Huds. Fl. An.* 120. *With. Bot. Arr.* 295. *Lightf. Scot.* 1096. *t.* 35.

A STILL more uncommon plant than the last. Mr. Mackay, nurseryman, near Edinburgh, sent a young root of it from Scotland, which flowered the following year, and from thence our figure was taken. It grows in moist meadows in the lowlands of North Britain, and has also been observed in considerable plenty in the flat parts of Wales. It is perennial, flowering about July and August.

The root consists of oblong fleshy radicles, tapering to a point. Stem 12 or 18 inches high, erect, round, striated, but little branched, and almost naked. Leaves mostly radical and very remarkable, consisting of a simple rib, along which are arranged pairs of deeply cloven leaflets, whose numerous segments are linear, acute, extremely narrow, pointing in all directions, so as to form whorls, and that as truly as the flowers do in the *Menthæ* and other whorled plants, properly so called, for those grow only on two sides of the stem, though they seem to embrace it all round. Umbels erect, of about 8 or 10 rays, with a general involucre of 3 or 4 short ovate pointed leaves. Partial umbels more dense, and nearly flat, with similar, but more numerous, involucre. Petals nearly equal, inflexed, white. Antheræ purplish. Germen ovate, striated. Fruit slightly compressed, deeply furrowed, crowned with the short recurved permanent styles. The seeds are slightly, but not pleasantly, aromatic.



SISON *Amomum*.*Hedge Honewort.*

PENTANDRIA Digynia.

GEN. CHAR. *Fruit* ovate, striated. *Involucra* both general and partial, each of about 4 leaves. *Petals* lanceolate, inflexed.

SPEC. CHAR. Leaves pinnated. Umbels erect, of about four rays.

SYN. Sison *Amomum*. *Linn. Sp. Pl.* 362. *Sm. Fl. Brit.* 315. *Huds.* 119. *Willd.* 300. *Hull.* 62. *Relb.* 116. *Sibth.* 97. *Abbott.* 63.

Sium aromaticum, Sison Off. *Raii Syn.* 211.

ONE species of *Sison*, and that the more rare, has appeared in our 4th volume, t. 228; the only remaining British plant of this genus is *S. Amomum*, which not very unfrequently occurs in rather moist spots under hedges, where the soil is marly or chalky, flowering in the latter part of summer.

Root annual or biennial, spindle-shaped, with lateral branches. Stem erect, 2 or 3 feet high (except in dry places), much branched and spreading, rather zigzag, round, furrowed, smooth, leafy. Leaves pinnate with a terminal lobed leaflet, unequally serrated; the upper ones more compound or divided. Umbels numerous, terminal, solitary, erect when in flower, composed of about 4, seldom more, unequal rays, with a small four-leaved general involucre. Partial umbels likewise of but few and unequal rays, with a minute four-leaved partial involucre. Flowers of 5 white inflexed petals, broader than those of *S. segetum*. Calyx scarcely perceptible. Fruit ovate, short, compressed, ribbed.

The seeds are aromatic and pungent when ripe and dry; but in an early state they, like the whole herb, have a peculiarly nauseous smell.



This is now published by J. E. Lawrence, London.

S I S O N fegetum.

Corn Honewort.

PENTANDRIA Digynia.

GEN. CHAR. *Fruit* oval, striated. *Involucra* both general and partial, each of about four leaves.

SPEC. CHAR. Leaves pinnated; leaflets roundish. Umbels drooping.

SYN. Sison fegetum. *Linn. Sp. Pl.* 362. *Huds. Fl. An.* 120. *Witb. Bot. Arr.* 294. *Relb. Cant.* 117. *Sibth. Oxon.* 97.

Sium arvense five fegetum. *Raii Syn.* 211.

Selinum Sii foliis. *Ger. em.* 1018.

COMMUNICATED from fields near Kelmarsh, in Northamptonshire, by William Hanbury, Esq. It has been observed in several parts of England in a chalk or clay soil, but not very frequently. Messrs. Forsters find it at Walthamstow. It flowers in July, and is annual in general, though often biennial, as we find remarked by that accurate observer Mr. John Goodyer, in Gerarde's Herbal. His whole account of this herb, with the origin of its name *Honewort* (from its curing a swelling in the cheek, called a Hone), with all the history of "Mistress Ursula Leigh," and "Mistress Charitie Leigh," is a model of accurate inquiry and precise information.

Root small, but strong. Stems several, spreading in every direction, slender and rush-like, but branched, and furnished with several alternate pinnated leaves. The radical leaves are the largest, consisting of from seven to fifteen neat little roundish leaflets, sharply serrated, and scarcely lobed. The general umbels are of very few and unequal rays; the partial ones are drooping, and, as Goodyer says, "uneven or unordered," their flower-stalks being very various in length. Flowers very small. Petals regular, incurved. Antheræ purple. Fruit striated, pungent and aromatic, as is the whole plant in some degree.



O E N A N T H E fistulosa.

*Common Water-dropwort.**PENTANDRIA Digynia.*

GEN. CHAR. *Florets* irregular: those of the disk sessile and barren. *Fruit* crowned with the calyx.

SPEC. CHAR. Root sending forth runners. Stem-leaves pinnated, cylindrical, tubular. General involucre, for the most part, wanting.

SYN. *Oenanthe fistulosa*. *Linn. Sp. Pl.* 365. *Huds. Fl. An.* 121. *With. Bot. Arr.* 296. *Relh. Cant.* 117. *Sibth. Ox.* 98.

O. aquatica. *Raii Syn.* 210.

EXCEEDINGLY common in wet ditches, ponds and rivers, flowering in July. The root is fibrous and perennial, sending forth under water several creeping runners, by which it is increased, and throwing up tall branching stems to a considerable height above the surface. These stems are tubular, contracted at the joints, striated, of a glaucous hue. Radical leaves bipinnate; the leaflets flat, wedge-shaped and lobed: stem-leaves alternate, pinnate; their leaflets and common foot-stalks cylindrical and hollow. Umbels on long, strong, alternate stalks, lateral and terminal: general rays from 3 to 7 or 8, mostly naked, but sometimes furnished with one linear leaf of an involucre: partial umbels with many rays, and a partial involucre of several membranous leaves. Calyx-teeth sharp and always spreading. Petals very unequal, with incurved points. Stamina long. Styles after impregnation much elongated, and erect, giving the ripening umbels a bur-like appearance. Stigmas capitate.

The variety β of Hudson is a very trifling one. Dr. Stokes observes that in some situations this species acquires the habit of *O. pimpinelloides*, but may be readily known by the want of a general involucre. We presume this remark alludes to our *O. peucedanifolia*, see *t.* 348.



OENANTHE pimpinelloides.

Parsley Water-dropwort.

PENTANDRIA Digynia.

GEN. CHAR. *Florets* irregular: those of the disk sessile and barren. *Fruit* crowned with the calyx.

SPEC. CHAR. Leaflets of the radical leaves wedge-shaped, cloven; those on the stem entire, linear, very long. General involucre of several linear leaves.

SYN. *Oenanthe pimpinelloides.* *Linn. Sp. Pl.* 366.
Huds. Fl. An. 121. *With. Bot. Arr.* 297.

O. Staphylini folio aliquatenus accedens. *Raii Syn.* 210.

WE have received this from the Rev. Mr. Hemsted, and from the Rev. Mr. Hugh Davies. The latter gathered it in salt marshes near Aber, North Wales.

Root perennial, consisting of several slender fusiform fleshy tubercles, intermixed with fibres. Stem erect, or ascending, with so many angles as to be almost cylindrical, striated, smooth, leafy, not much branched. Radical leaves bipinnate; the leaflets either elliptical and entire, or wedge-shaped, and more or less cloven: Stem-leaves pinnate, scarcely bipinnate; leaflets long, linear and acute. Umbels terminal. Involucra of several linear leaves, the partial ones most numerous. Calyx of 5 unequal, sharp, spreading, considerable leaves. Petals unequal, with a point so inflexed as to render them inversely heart-shaped, as in many of this tribe, sometimes reddish on the back. The flowers appear in July, and perfect but few seeds.

This species is not esteemed poisonous, but the whole genus is certainly to be suspected, on account of the very dangerous *Oenanthe crocata*.



Sept. 1906. H. B. K. 1847. 1848. 1849.

OENANTHE *peucedanifolia*.*Sulphur-wort Water-dropwort.**PENTANDRIA Digynia.*

GEN. CHAR. *Florets* irregular: those of the disk sessile and barren. *Fruit* crowned with the calyx.

SPEC. CHAR. Leaflets all linear. General involucre none. Knobs of the root sessile, elliptical.

SYN. *Oenanthe peucedanifolia*. *Pollich Plant. Palat.* vol. 1. 289. t. 3. *Sibth. Ox.* 98.

SENT by W. Mathew, Esq. from near Bury, and by the Rev. Mr. Abbot from the neighbourhood of Bedford. Professor Sibthorp also found it in several places about Oxford, as mentioned in his *Flora*. No other British author has noticed this species, probably having confounded it with *O. pimpinelloides*, which is rather a maritime plant, while *peucedanifolia* grows in fresh inland waters.

The root of this consists of thick oval or elliptical knobs, which taste something like parsnep, but are probably dangerous food. Stem thicker than in the preceding, as well as taller and more erect. Radical leaves bipinnate; stem-leaves scarcely more than pinnate; leaflets all linear and acute, by which it is at once distinguished from the preceding, as well as by the want of a general involucre, of which there are scarcely ever any signs. The rays of the general umbel are also fewer and much thicker than in *O. pimpinelloides*, and the calyx is more erect. The flowers appear in June, and are often reddish, the marginal ones frequently female only, being impregnated by those of the centre.



100. 106. *Trifolium* 101. *Platanus* 102.

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O E N A N T H E *crocata*.*Hemlock Water Dropwort.**PENTANDRIA Digynia.*

GEN. CHAR. *Flowers* irregular: those of the disk sessile and abortive. *Fruit* crowned with the calyx and styles; its bark corky.

SPEC. CHAR. All the leaflets wedge-shaped, cut, nearly equal.

SYN. *Oenanthe crocata*. *Linn. Sp. Pl.* 365. *Sm. Fl. Brit.* 319. *Huds.* 121. *With.* 302. *Hull. ed.* 2. 83. *Sibth.* 99. *Jacq. Hort. Vind.* v. 3. 32. t. 55. *Woodv. Suppl.* t. 267.

Oe. cicutæ facie Lobelii. Raii Syn. 210.

HAPPILY this very noxious plant is of rare occurrence. We received specimens from Mr. W. Borrer. It grows in watery situations about the brinks of great rivers, as the Thames, and others, flowering in July.

The root is perennial, composed of numerous ovate fleshy knobs, whose juice is peculiarly virulent. The stems are from two to five feet high, erect, branched, leafy, round, furrowed. Leaves dark green, bipinnate; their leaflets all nearly similar, mostly opposite, sessile, wedge-shaped or somewhat deltoid, more or less cut, veiny, smooth. Umbels terminal, large, convex, of many general and partial rays. General and partial involucre various in form; sometimes linear and undivided; often dilated and leafy. Flowers white, often with purplish styles and anthers, slightly radiant. Calyx incurved. Fruit oblong, crowned with the erect permanent styles.

The whole herb contains a fetid yellow juice, and is very poisonous. Ehret found a giddiness affect him while drawing it. Sir Thomas Frankland has known brood mares sometimes to eat the root, and to die in consequence.



C O R I A N D R U M fativum.

Coriander.

P E N T A N D R I A Digynia.

GEN. CHAR. *Corolla* radiate ; *petals* inflexed, cloven.

General Involucrum of one leaf ; *partial ones* going but half way round. *Fruit* sphaerical.

SPEC. CHAR. The two seeds combining to make one uniform globe.

SYN. *Coriandrum fativum.* *Linn. Sp. Pl.* 367. *Huds.*

Fl. An. 123. *With. Bot. Arr.* 302.

Coriandrum. *Raii Syn.* 221.

CORIANDER is supposed to be a native of the south of Europe, and, from having been cultivated in England as a medicinal plant, to have become naturalized in some parts of the kingdom, particularly in fields about Ipswich.

The root is annual; lower leaves lobed and cut; upper ones in very fine linear alternate segments; flowers white or reddish, appearing in June; and the seeds are ripe in July and August. The aromatic flavour of the latter is agreeable to most palates; and we are obliged to Dr. Withering, for rescuing them from the charge of unwholesomeness (*Bot. Arr.*). All the rest of the plant is, when bruised, abominably foetid.



684



CICUTA virosa.

Water Hemlock. Water Cow-bane.

PENTANDRIA Digynia.

GEN. CHAR. No general *brvolucrum*. Fruit nearly ovate, furrowed. *Corolla* almost regular.

SPEC. CHAR. Umbels opposite to the leaves. Stipulæ running up the leaf-stalks, blunt.

SYN. *Cicuta virosa*. *Linn. Sp. Pl.* 366. *Huds.* 122. *Witb.* 304. *Relb.* 119.

Sium alterum, *Olusatrici* facie. *Raii Syn.* 212.

HAPPILY this dangerous plant is not very common. We received it from Tuddenham-heath, where it was gathered by the Rev. Mr. Hemsted in August last. It grows in ditches, and the margins of rivers, always under water when young, in which situation cows and bullocks, to which animals it is a deadly poison, sometimes by mistake eat it. By what Haller has collected it appears to be poisonous also to mankind, by quickly inflaming the stomach, as well as to the canine genus. Horses, hogs, and goats eat it with impunity. Linnæus in his *Flora Lapponica* gives a most exquisite detail of the reasons which led him to conclude this plant to be the cause of a terrible disease among the cattle at Tornoa in Lapland, by which he rendered an invaluable service to that country.

The root is perennial, tuberous, separated internally into several cavities by transverse partitions. Stem branched, furrowed, 3 or 4 feet high. Leaves twice ternate, the larger pinnate; their common stalk bordered a great way up by a membranous blunt stipula; leaflets lanceolate, serrated, smooth, bright green. Umbels on footstalks various in length, opposite to each leaf, consisting of several principal rays (without any general involucrum), and still more numerous short partial rays, encompassed by an involucrum of many narrow lanceolate leaves. Calyx somewhat campanulate. Petals nearly all of a size, rolled in, white. Fruit swelled, of a short ovate figure, ribbed.

The *Cicuta virosa* can hardly be confounded with any other British plant, if the form of the leaves and situation of the flowers be attended to. Its flavour is foetid and pungent. If it should unfortunately be taken into the stomach, a speedy emetic is the best remedy, or a dose of oil.



ÆTHUSA Cynapium.*Fool's Parsley.**PENTANDRIA Digynia.*

GEN. CHAR. *General involucrum none: partial of 3 leaves, all on one side, pendulous. Fruit striated.*

SPEC. CHAR. *Leaves all uniform.*

SYN. *Æthusa Cynapium. Linn. Sp. Pl. 367. Sm. Fl. Brit. 323. Huds. 123. With. 304. Hull. 62. Relh. 118. Sibth. 99. Abbot. 65. Curt. Lond. fasc. 1. t. 18.*

Cicutaria tenuifolia. Raii Syn. 215.

FOOL'S PARSLEY, or Lesser Hemlock, has many botanical characters in common with the *Conium* described in our last plate, but its much smaller size, broader leaves, unspotted stem, and the want of a general involucrum preclude all possibility of mistake between them. The plant now before us is much more likely to be mistaken for Garden Parsley, as being a common weed in the gardens and fields, and bearing a great resemblance to that useful herb. To distinguish them, the dark dull green of the Fool's Parsley must be observed, and its nauseous garlick scent, instead of the pleasant aromatic flavour of the other. When the umbels appear, the long pendulous leaves of the partial involucrum at once distinguish the *Æthusa*. We are not sure of the very poisonous qualities attributed by some to this plant, but it is at least unwholesome, as well as unpleasant, and by no means eligible for food or medicine.

It is annual, flowering in July and August. The stem round, slender, about a foot high, slightly striated, branched and leafy. Leaves smooth, doubly pinnate; leaflets oblong, decurrent and cut. Umbels on long stalks, flattish. Flowers white. Petals a little unequal or radiant. Fruit ovate, swelling, striated. The stem has often a violet tinge, but is not spotted.



[697]

SCANDIX odorata.

*Sweet Cicely. Great Chervil.**PENTANDRIA Digynia.*

GEN. CHAR. *Gen. Involucrum* none. *Flowers* radiant. *Petals* notched. *Fruit* awl-shaped. *Central flowers* often male.

SPEC. CHAR. Seeds furrowed, angular, smooth.

SYN. *Scandix odorata. Linn. Sp. Pl. 368. Sm. Fl. Brit. 323. Hudsf. 124. Witb. 306. Hull. 63. Sibth. 100. Lightf. 166.*

SENT from the North of England by Mr. Robson, flowering in May. There has been much controversy whether this plant should be reckoned a native or not. It is found abundantly in Westmoreland, Cumberland, &c. as well as in the Lowlands of Scotland, and in some parts of Wales, but always in orchards or pastures near houses, its aromatic seeds making a part of the humble luxuries and simple medicines of the mountain cottager. The Rev. Mr. Wood thinks it certainly wild near Leeds; but the most ancient and therefore best authority on this subject is Dr. Richardson, the friend of Ray, a specimen from whom is in Buddle's herbarium, with an inscription asserting the Sweet Cicely to be truly wild in meadows betwixt Morton and Rushforth in the West Riding of Yorkshire.

The root we believe is perennial, spindle-shaped, and aromatic. Stems a foot and half high, branched, furrowed. Leaves sessile, pale-green, hairy, triply winged, and pinnatifid. Umbels terminal, erect, of many rays. The partial involucre lanceolate, deflexed, membranous, pale. Flowers white; the central ones most numerous, and having abortive germens. Seeds large, about an inch long, erect, lanceolate, acute, not beaked, furrowed, smooth, of a shining brown, with a sweet aromatic flavour, and crowned by the spreading styles.

597



[1397]

SCANDIX Pecten-Veneris.

*Needle Chervil.**PENTANDRIA Digynia.*

GEN. CHAR. *Gen. involucrum* none. *Flowers* radiant. *Petals* notched. *Fruit* awl-shaped. *Central flowers* often male.

SPEC. CHAR. Seeds roughish, with very long beaks. Leaflets cut into many linear segments.

SYN. *Scandix Pecten-Veneris.* *Linn. Sp. Pl.* 368. *Sm. Fl. Brit.* 324. *Huds.* 123. *With.* 307. *Hull.* 63. *Relh.* 118. *Sibth.* 100. *Abbot.* 66. *Curt. Lond. fasc.* 5. t. 21. *Mart. Rust. t.* 38. *Dicks. H. Sicc. fasc.* 15. 4.

S. semine rostrato vulgaris. *Raii Syn.* 207.

THREE British species of *Scandix* have been described in this work already. The only remaining one, as far as has been yet observed, is the most common of all in cultivated ground, and is known by the name of Venus's Comb, or Shepherd's Needle, in allusion to the remarkably long beaks of the seeds, resembling needles, or the teeth of a comb. It begins flowering in June and lasts till September, being not very conspicuous till the seeds are fully grown.

Root annual. Stems branched, spreading, leafy, furrowed and rough, various in height and luxuriance. Leaves light green, alternate, triply pinnatifid, their segments linear, acute, smoothish; their common footstalks dilated and clasping the stem. Umbels of 2 or 3 long rays; the partial ones of several short rays. Partial involucrum of many membranous leaves, variously jagged, and rough-edged. Flowers small and white. Seeds rough, as well as their long angular beaks. The petals can scarcely be called notched, but are curled in, which gives them that appearance, though less than in many other umbelliferous flowers.



Daucus carota L.

SCANDIX Cerefolium.

Garden Chervil.

PENTANDRIA Digynia.

GEN. CHAR. *Gen. involucrum* none. *Flowers* radiant. *Petals* notched. *Fruit* awl-shaped. *Central flowers* often male.

SPEC. CHAR. *Seeds* polished, a little swelling. *Umbels* sessile, lateral.

SYN. *Scandix Cerefolium*. *Linn. Sp. Pl.* 368. *With.* 307. *Hull.* 63. *Jacq. Fl. Austr. v. 4.* 47. *t.* 390. *Cerefolium vulgare sativum*. *Ger. em.* 1038.

THIS plant is in the same predicament with *Avena strigosa*, *t.* 1266. Dr. Withering mentioned it in his work, from Dr. Stokes's having found it about Worcester. It appeared too probably to have escaped from gardens, where it is sometimes cultivated for sallads and soups, to find a place in the *Flora Britannica*. Mr. Wigg and Mr. Turner having observed it, to all appearance wild, and in great plenty, on a bank near Halesworth, Suffolk, in June 1803, and sent us the specimen in the annexed plate; we have determined to publish it. Future observers may decide whether it be truly indigenous or not. The umbelliferous tribe are so often but casually inspected, and many of them are so much alike, that this *Scandix* may possibly have been overlooked for the *Anthriscus*, *t.* 818, which grows in similar situations.

The root is annual. Herbage pale green, shining, delicate and tender, with an aromatic sweetish flavour. Stem branched, round, hollow, striated, a little hairy about the joints only. Leaves spreading, bipinnate and cut, with hairy stalks. Umbels sessile, opposite to the leaves, of about 4 general rays, the partial ones of about 10 or 12, all more or less woolly. Partial involucrum of a few sharp lateral leaflets. Flowers perfectly white. Fruit tapering, furrowed, smooth and polished.

In France this plant often makes a principal ingredient in sallads, and is of much more general use than with us.

1264



Fig. 1 1804 Published by T. J. Smith, London.

SCANDIX Anthriscus.

*Rough Chervil.**PENTANDRIA Digynia.*

GEN. CHAR. *Gen. Involucrum* none. *Flowers* radiant. *Petals* notched. *Fruit* awl-shaped. *Central flowers* often male.

SPEC. CHAR. *Seeds* ovate, bristly, beaked. *Corolla* uniform. *Stem* smooth.

SYN. *Scandix Anthriscus.* *Linn. Sp. Pl.* 368. *Sm. Fl. Brit.* 325. *Huds.* 124. *Relb.* 121. *Sibth.* 100. *Abbot.* 66. *Curt. Lond. fasc.* 1. t. 19. *Mart. Fl. Rust.* t. 75. *Dicks. H. Sicc. fasc.* 15. 3.

Caucalis scandicina. *With.* 289. *Hull.* 59.

Myrrhis sylvestris feminibus asperis. *Raii Syn.* 220.

THE plant now before us is remarkable for growing almost exclusively in the neighbourhood of large towns, and its rough seeds perhaps afford another instance of that provision of nature we have remarked in *Galium Aparine*, t. 816. The banks of hedges, and other dry dusty much-frequented places, abound with it in the spring; nor does the whole vegetable kingdom afford a more exquisite green, nor scarcely a more rich and elaborate foliage, than the young plants of this *Scandix* display in the earliest months of the year. Its beauty in that state readily distinguishes it from all its neighbours. In May the flowers are in perfection, and the herb soon sows its seeds and withers away.

The stem is 2 or 3 feet high, round, very smooth, a little swelling under each joint. Leaves triply winged, finely cut, a little hairy. Umbels lateral and terminal, of 5 or more general rays, without an involucrum; and as many partial ones; with small partial involucra. Flowers small, white, all uniform and hermaphrodite. Seeds ovate, rough, crowned with a short smooth beak, which so perfectly evinces its affinity to *Scandix*, and is so peculiar to the genus, that we cannot sufficiently wonder at those who first removed this plant to *Caucalis*.

818.



CHÆROPHYLLUM sylvestre.

Smooth Cow-parsley.

PENTANDRIA Digymia.

GEN. CHAR. *General Invol.* none; *partial* reflexed, concave. *Petals* heart-shaped. *Fruit* oblong, smoothish.

SPEC. CHAR. Stem striated, smooth; slightly swelling below the joints.

SYN. Chærophyllo sylvestre. *Linn. Sp. Pl.* 369. *Sm. Fl. Brit.* 326. *Huds.* 124. *Witb.* 308. *Hull.* 63. *Relb.* 121. *Sibth.* 100. *Abbot.* 66. *Curt. Lond. fasc.* 4. t. 25. *Mart. Fl. Rust.* t. 96.

Cicutaria vulgaris. *Raii Syn.* 207.

FREQUENT about hedges in the borders of rather fertile pastures, flowering about the end of April or early in May, being one of our earliest umbelliferous plants.

Root perennial, spindle-shaped, slightly milky, but little branched. Stem about 3 feet high, erect, branched, leafy, round, striated, a little swelled below the joints, more especially as the plant advances in age; it is for the most part downy towards the bottom, but the upper part is sleek, and in general (though not always) devoid of pubescence. Leaves triply pinnate, the leaflets deeply cut, almost sessile, rough at the edge. Umbels when young more or less drooping, though commonly less so than in *C. temulentum*; as the flowers expand they become quite erect. *Involucella* ovate, membranous, fringed with thick-set white hairs. Flowers whitish; their stalks smooth. Petals more or less notched, rarely entire, a little irregular. Fruit oblong, somewhat elliptical, composed of 2 nearly cylindrical seeds, externally very slightly ribbed, and destitute of all roughness.

The whole herb has a sweetish carrot-like smell and taste, and is eaten by domestic cattle. Rabbits are said to be peculiarly fond of it.

The almost equally common *C. temulentum* is distinguished by its more swelling, spotted, and very rough stem, and bristly flower-stalks.



CHÆROPHYLLUM temulentum.*Rough Cow Parsley.*

PENTANDRIA Digynia.

GEN. CHAR. *General invol. none; partial reflexed, concave. Petals heart-shaped. Fruit oblong, smoothish.*

SPEC. CHAR. *Stem rough, swelled under each joint.*

SYN. *Chærophyllum temulentum. Linn. Sp. Pl. 370.*

Sm. Fl. Brit. 326. Huds. 125. With. 308.

Hull. 63. Relh. 119. Sibth. 101. Abbot. 66.

Curt. Lond. fasc. 6. t. 24.

Cerrefolium sylvestre. Raii Syn. 207.

COMMON in shady places and under hedges, where its flowers are seen in abundance throughout the months of June and July. The rough stem, swelled below the insertion of every leaf, and speckled with purple, and the young drooping umbels, are its distinguishing characters.

The root is biennial, tap-shaped, often divided. Stem about 3 feet high, branched, leafy, round, slightly striated, rough with spreading hairs. Leaves alternate, doubly pinnate, pinnatifid and lobed, hairy, pale or rather glaucous beneath. Umbels rough, spreading. Partial involucra lanceolate, slightly confluent at their base, rough at the margin and keel. Petals pure white, irregular, deeply cloven. Fruit oblong, very smooth and polished, scarcely striated.

The whole plant has a sweetish aromatic flavour, and is eaten by cattle. It is often subject to a blight or mildew.



CHÆROPHYLLUM aureum.

*Tawny-seeded Cow Parsley.**PENTANDRIA Digynia.*

GEN. CHAR. *General invol. none; partial reflexed, concave. Petals heart-shaped. Fruit oblong, smoothish.*

SPEC. CHAR. *Stem somewhat swelling, angular, more or less hairy. Leaflets pinnatifid, acute, cut. Seeds coloured, ribbed.*

SYN. *Chærophylum aureum. Linn. Sp. Pl. 370; but not Mant. 356. Jacq. Austr. v. 1. 40. t. 64.*

Cerfolium n. 749. Hall. Hist. v. 1. 328.

Myrrhis perennis alba minor, foliis hirsutis, semine aureo. Rupp. Jen. ed. Hall. 282. t. 5.

THIS is one of those rare plants discovered by Mr. G. Don, with which few botanists are at all acquainted. He found it in the borders of fields, between Arbraath and Montrose, and at Corstorphine near Edinburgh. It is perennial, flowering in June.

The stem is about three feet high, branched, solid, angular, striated, slightly tumid below each joint, clothed more or less with short, soft, deflexed hairs, among which a few coarse bristles are occasionally interspersed, like those of the exotic *Ch. hirsutum*, but more deflexed. In Switzerland it is often nearly or quite smooth, as described by Jacquin. The common leaf-stalk surrounds the stem by a ring at its base, but its edges upwards are linear and but little dilated. The leaves and leaflets have sharp and rather elongated points, and are acutely pinnatifid, and roughish. Umbels flattish, cream-coloured, often having the rudiments of a general involucre. The seeds when young are rather tumid upwards; as they ripen they grow more lanceolate, of a tawny or yellowish hue, marked with three broad smooth ribs at each side, and crowned with the divaricate style.



[1380]

IMPERATORIA Ostruthium.

Masterwort.

PENTANDRIA Digynia.

GEN. CHAR. *General Invol.* none. *Flowers* all fertile.
Pet. inflexed, notched, nearly equal. *Fruit* roundish,
 compressed, bordered, swelling in the middle, with
 3 ribs. *Umbels* flat.

SPEC. CHAR.

SYN. Imperatoria Ostruthium. *Linn. Sp. Pl.* 371.
Sm. Fl. Brit. 527. *Lightf.* 168. *Huds.* 649.
With. 308. *Hull.* 68. *Woodv. Med. Bot. t.* 35.
 Imperatoria. *Ger. em.* 1001.

LIGHTFOOT is our only authority for admitting this as a British plant. He noticed it "on the banks of the Clyde in several places, and in the isle of Bute, near Mount-stewart," but was uncertain whether it were indigenous or not. The places mentioned seem such as are natural to it. Our specimen is necessarily a garden one.

Masterwort is perennial, and flowers in June. The root is tuberous, jointed, acrid, and aromatic, long supposed a sovereign remedy against all poison. Gerarde says it is "also singular against all corrupt and naughty aire and infection of the pestilence—cures pestilential carbuncles and botches—cold fits of agues—dropsy—dissolves all ventosities or windiness of the stomache and other parts—and greatly helpeth such as have taken great squats, bruises, or falls from some high place," &c. &c. Well might it be called Masterwort! It seems the master key of physic and surgery.—Its qualities and habit are certainly nearly akin to those of *Angelica*, though their botanical characters do not agree. The stem is a foot and half high, round, smooth. Leaves twice ternate, smooth, serrated and cut. Umbels of many rays, flattish, with scarcely ever any general involucre; the partial ones are of a few narrow leaves. Flowers almost uniform. Seeds with a broad border.



Herb. 1864. Published by J. S. Sargent. Ex. 100

PASTINACA sativa.***Wild Parsnep.*****PENTANDRIA Digynia.**

GEN. CHAR. *Fruit* elliptical, compressed almost flat. *Petals* involute, entire. *Involucra* neither general nor partial.

SPEC. CHAR. Leaves simply pinnate, downy beneath.

SYN. *Pastinaca sativa.* *Linn. Sp. Pl.* 376. *With.* 309. *Mart. Fl. Rust. t.* 83.

P. sylvestris. *Huds.* 125. *Relh.* 122. *Sibth.* 101. *Abbot* 67.

P. sylvestris latifolia. *Raii Syn.* 206.

THE wild Parsnep is found in the borders of fields and by road sides, plentifully enough on a calcareous or chalky soil, but not on any other, flowering in July, and the root is biennial. We received it from Norfolk by favour of the Rev. Mr. Watts.

Root spindle-shaped, white, aromatic, sweet, with a degree of acrimony. Stem 3 feet high, erect, branched, angular, furrowed, roughish. Leaves pinnate, with footstalks dilated at the base; leaflets from 5 to 9, sharply serrated and somewhat cut, downy beneath; the odd one in three lobes. Umbels terminal, solitary, erect, of several roughish rays. Involucrum in general altogether wanting, but sometimes a small solitary leaf occurs at the base of the general, as well as partial flower-stalks; for it is well known to practical botanists, that this part affords by no means such certain generic characters in umbelliferous plants as Linnaeus and Artedi thought, the seeds being more to be trusted. The flowers are small, with deep-yellow petals rolled inwards. Fruit large, elliptical, flat, ribbed, smooth, of a very light brown when ripe.

The garden parsnep is a cultivated variety of this, with larger smoother leaves, and a mild eatable root. There is no reason to change the Linnæan name *sativa*, which expresses, that this is the species which is cultivated.



SMYRNIUM Olusatrum.

*Alexanders.**PENTANDRIA Digynia.*

GEN. CHAR. *Fruit* oblong, angular. *Petals* pointed, carinated. Many *flowers* abortive. *Involucra* none.

SPEC. CHAR. Stem-leaves in threes, on footstalks, ferrated.

SYN. Smyrnium Olusatrum. *Linn. Sp. Pl.* 376.
Huds. Fl. An. 126. *With. Bot. Arr.* 310. *Relb.*
Cant. 123. *Sibth. Oxon.* 101.

Smyrnium. *Raii Syn.* 208.

THIS is rather a maritime plant, and is found near the coast in many places ; but whether from having been formerly cultivated as a pot-herb, or the seeds dispersed by any other means, it now occurs about many inland towns, as Nottingham, York, Bury, Newmarket, and about Mackerell's tower Norwich. The root is biennial, and the flowers appear in May. By the middle of July the stalks are dried up, but remain laden with large black seeds.

The stem is strong, deeply furrowed. Leaves large, twice or thrice ternate, cut and ferrated. Flowers small, numerous and irregular. The whole herb is of a pale bright green, smooth, succulent, in flavour something like celery, but more strong and bitter. It is now out of use, though formerly eaten in various parts of Europe, either as a salad or pot-herb, whence the name *Olus atrum*. Ray thinks it was called *Alexanders* because in Italy and Germany it had long been denominated *berba Alexandrina*, having been supposed to be brought from Alexandria.



Fig. 1.

Fig. 2.

ANETHUM Foeniculum.

*Common Fennel.**PENTANDRIA Digynia.*

GEN. CHAR. *Invol.* none. *Fruit* ovate, slightly compressed, striated. *Petals* rolled in, entire.

SPEC. CHAR. *Fruit* swelling. *Stem-leaves* numerous, curved downwards.

SYN. *Anethum Foeniculum.* *Linn. Sp. Pl.* 377. *Sm. Fl. Brit.* 329. *Huds.* 126. *With.* 310. *Hull.* 64. *Relh.* 121. *Abbot.* 67. *Woodv. Med. Bot. t.* 160. *Foeniculum vulgare.* *Raii Syn.* 217.

VERY plentiful about the chalk-pits of Kent and other counties, flowering in July and August, when its golden umbels, contrasted with its dark leaves, form a striking object.

The root is biennial, tap-shaped. Herb smooth, of a deep, but glaucous, green. Stem 4 feet high, erect, round, hollow, much branched, striated. Leaves triply pinnate, their leaflets very narrow, awl-shaped, long, and more or less pendulous. Umbels terminal, large, of many even-topped rays. Calyx obsolete. Petals deep-yellow, rolled in, furrowed, entire. Unripe germen obtuse, crowned with a thick yellow glandular substance the base of the styles. Stamina spreading and recurved, yellow. Fruit ovate, swelling, scarcely compressed, furrowed, with 3 ribs on each side.

This is the common garden Fennel, whose leaves are used both for ornament and food, and whose seeds are useful as a carminative medicine, particularly for young children. Their flavour is sweet, and to most people gratefully aromatic.



[1503]

C A R U M Carui.

*Common Caraway.**PENTANDRIA Digynia.*

GEN. CHAR. *Fruit* cylindrical, striated, somewhat elliptical. *Petals* keeled, inflexed, notched, nearly uniform. *General involucrum* of few leaves; *partial* none. *Outer flowers* abortive.

SPEC. CHAR.

SYN. Carum Carui. *Linn. Sp. Pl.* 378. *Sm. Fl. Brit.* 330. *Huds.* 126. *With.* 311. *Hull.* 64. *Relh.* 121. *Abbot.* 68. *Mart. Rust. t.* 55. *Woodv. Med. Bot. t.* 45. *Jacq. Austr. t.* 393.

C. seu Careum. Raii Syn. 213. *Ger. em.* 1034.

CARAWAY seeds are known to every one for their general use among confectioners, and their aromatic pleasant flavour. The plant which bears them is a native of the warm and dry parts of Europe, which has become imperfectly naturalized in England, and is often found in grassy fields and pastures; but being a biennial, and commonly mown with the grass before it ripens seed, it is seldom stationary any where. Dr. Abbot informs us it has remained for more than half a century in a lonely spot called the Park field at Thurleigh, Bedfordshire, where its seeds are annually collected for use.

The root is spindle-shaped, pale brown. Stem about 2 feet high, erect, branched, angular, furrowed, smooth. Leaves smooth, doubly pinnate, cut into linear narrow segments; the lowermost crossing each other. Umbels numerous, terminal, upright. General involucrum of 1, 2 or 3 small narrow entire leaves, often wanting: partial none, unless by a very extraordinary accident to which all this tribe are liable. Petals nearly uniform, white or very pale flesh-coloured, inflexed so as to become heart-shaped. Calyx entire. Central flowers only fertile. Fruit small, oblong, striated; each seed almost cylindrical.



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PIMPINELLA saxifraga.

*Common Burnet-Saxifrage.**PENTANDRIA Digynia.*

GEN. CHAR. *Involucra* none. *Fruit* ovato-oblong, ribbed. *Petals* inflexed, *Stigmas* somewhat globular.

SPEC. CHAR. Leaves pinnate: leaflets of the radical ones roundish; those of the uppermost linear.

SYN. *Pimpinella saxifraga*. *Linn. Sp. Pl.* 378. *Huds. Fl. An.* 127. *With. Bot. Arr.* 313. ed. 3. 311. *Relh. Cant.* 124. *Sibth. Ox.* 102.

P. saxifraga minor, foliis *Sanguisorbæ*. *Raii Syn.* 213, n. 2 & 3.

A NATIVE of dry gravelly and calcareous soils, flowering in July and August.

Root perennial, strong and woody, highly aromatic and pungent, to some persons not unpleasant, especially when dry. Stems about a foot high, erect, slender, rigid, round, striated and roughish, varying much in luxuriance, generally branched above. Leaves on long footstalks, pinnated, veiny, roughish and rigid; the leaflets of the first radical ones roundish or ovate, acutely serrated and generally deeply notched, especially the terminal leaflet; the other leaves are composed of decurrent, linear, often falcated, sometimes twice pinnatifid leaflets, those which grow high on the stem being the narrowest and most simple, and their common footstalk more membranous and dilated than in the rest. Umbels drooping when young, destitute of general or partial *involucra*. Flowers small, nearly regular, white, with long stamina. Top of the germen very tumid, and reddish. Styles short. Seeds small.

From repeated observations made on this plant wild in many different places, we entirely agree with Dr. Withering, that all the varieties enumerated in his 3d edition (except *P. orientalis* of Gouan, which we have never seen in England) really constitute but one species. Our figure is taken from a good intermediate wild specimen. The characters of almost all the varieties may be found in it. The botanist will in vain attempt to meet with the exclusive characters of any one of them in many different individuals. Such a kind of variety is like the ghost in Hamlet, or Mrs. Radcliffe's mysterious monk of Paluzzi; we can no sooner say "'tis here," than the next moment "'tis gone."



Lappula R.

PIMPINELLA magna.

*Great Burnet-Saxifrage.**PENTANDRIA Digynia.*

GEN. CHAR. *Involucra* none. *Fruit* ovato-oblong, ribbed. *Petals* inflexed. *Stigmas* somewhat globular.

SPEC. CHAR. Leaves pinnate; leaflets ovate, the terminal one three-lobed.

SYN. *Pimpinella magna*. *Linn. Mant.* 219. *Wuh. Bot. Arr.* 314. *ed. 3.* 313. *Relh. Cant.* 125. *Sibth. Ox.* 102.

P. major. *Huds. Fl. An.* 127.

P. saxifraga. *Raii Syn.* 213.

THIS species is less common than the preceding, and grows chiefly in woods and hedges in a calcareous soil, flowering in August or later. We received it from Mr. Robson. Dr. Smith observed it under the walls of York.

Root perennial, woody, like that of *P. saxifraga* in flavour, but rather weaker. Stem 2 feet or more in height, round, striated. Leaves on rather shorter footstalks than in the last described, pinnated, but of fewer leaflets (scarcely more than 3 pair), and those larger, ovate, or ovato-lanceolate, the terminal one more or less deeply three-cleft, and all strongly serrated. Sometimes, as it is reported, the upper leaves are deeply pinnatifid, but that is not generally the case. Flowers commonly white, about the size of the last, and like them in structure; but in alpine situations they often become rose-coloured.

Linnæus originally confounded this with the last, but was afterwards convinced of his mistake; it being very different in habit and size, and essentially distinguished by the form, as well as greater smoothness, of the leaves. Hudson always made them distinct.



1879, Published by J. Smith, London

PIMPINELLA dioica.

Dwarf Burnet-Saxifrage.

PENTANDRIA Digynia.

GEN. CHAR. *Invol.* none. *Fruit* ovate-oblong, striated. *Petals* inflexed. *Stigmas* somewhat globular.

SPEC. CHAR. Leaflets all nearly linear. Umbels panicled. Flowers dioecious.

SYN. *Pimpinella dioica.* *Linn. Syst. Veg. ed. 13.* 241. *Sm. Fl. Brit.* 332. *Huds.* 128. *With.* 313. *Hull.* 65.

Seseli pumilum. *Linn. Sp. Pl.* 373.

Peucedanum minus. *Raii Syn.* 217. *Huds. ed. 1.* 101.

THIS species of *Pimpinella* has, in Britain at least, been found only on the limestone rocks below Bristol, and according to Hudson, near Uphill, Somersetshire. Our specimens were gathered by Mr. Sowerby in the first-mentioned place, where the plant was remarked in Ray's time. It is perennial, flowering in May and June, and is remarkable among the umbelliferous tribe for having male flowers on one root and female on another.

The whole herb is smooth, and of a glaucous hue. Root tap-shaped. Male plant generally most humble in size, and less spreading. Stem in both sexes angular, branched, purplish, leafy. Leaves doubly pinnate, the leaflets nearly linear, uniform, entire, channelled. Umbels numerous, upright, simple or compound. Flowers pale flesh-coloured, or pale buff; the males generally, but not always, without any signs of a germen; but the females are furnished with stamina, though imperfect ones. Fruit ovate, furrowed. Stigmas globular, the invariable generic character, though not sufficiently expressed in our *t.* 407 and 408.



APIUM graveolens.
Smallage, or Wild Celery.

PENTANDRIA Digynia.

GEN. CHAR. *Partial Invol.* none: *general* of 1 leaf.

Fruit ovate, ribbed. *Petals* inflexed, uniform.

SPEC. CHAR. Leaflets of the stem-leaves wedge-shaped.

Stem furrowed.

SYN. *Apium graveolens.* *Linn. Sp. Pl.* 379. *Sm. Fl.*

Brit. 333. *Huds.* 129. *With.* 314. *Hull.* 64.

Relh. 123. *Sibth.* 103. *Abbot.* 69.

A. palustre et officinarum. *Raii Syn.* 214.

TO bring under one view, as much as possible, a natural order of plants, we here exhibit another of the umbelliferous tribe, which frequently occurs in ditches and marshy places, especially near the sea, flowering in August or later. Though well known by the name of Celery in gardens, where culture renders it luxuriant, mild and wholesome, it would scarcely be recognized at the table in its slender wild form, neither would its acrid, and indeed poisonous, qualities make it welcome.

The root is biennial and tap-shaped. Stems widely spreading or floating, long, furrowed, leafy. The whole plant is smooth, of a pale green. Leaves pinnate or ternate; the leaflets wedge- or fan-shaped, especially in the stem leaves, shining, deeply cut: those of the radical ones are generally rounder. Umbels terminal and lateral, often sessile, irregular, with a single-leaved general involucre, which however is often wanting. Partial involucre none. Flowers small, uniform, of a pale greenish white. Fruit almost orbicular.



Sept 2 1893 Published by L. J. Smith, London

ÆGOPODIUM Podagraria.

*Gout-weed.**PENTANDRIA Digynia.*

GEN. CHAR. *General or partial Invol.* none. *Fruit* ovate-oblong, ribbed. *Petals* heart-shaped, with an inflexed point, unequal.

SPEC. CHAR.

SYN. *Ægopodium Podagraria.* *Linn. Sp. Pl.* 379.
Sm. Fl. Brit. 334. *Huds.* 129. *With.* 314.
Hull. 64. *Relb.* 126. *Sibth.* 103. *Abbot.* 69.
Angelica sylvestris minor, seu erratica. *Raii Syn.* 208.

A VERY general weed in shady waste places, very troublesome in gardens whose soil is rich or moist, as the creeping roots spread to a wide extent, and are difficult to extirpate. The flowers appear plentifully in May and June, but, except the roots are confined, produce little or no seed.

The stems are about a foot high, erect, not much branched, leafy, furrowed. Radical leaves on long stalks, twice ternate; the rest simply ternate, opposite, and on shorter dilated stalks: all the leaflets are large, pretty uniform, ovate, acute, doubly or unequally serrated, smooth. Umbels terminal, erect, solitary, of many rays, but without any general or partial involucre. Flowers pure white. Petals a little unequal in size, broad, heart-shaped from their incurved points. Fruit elliptical, rather compressed, smooth, with 3 prominent ribs to each seed.

The *Ægopodium* has an acrid pungent root, supposed to agree in qualities with the more active *Imperatoria* or *Masterwort*, and formerly used as a cataplasm in the gout, whence the English name. It has also been called *Herb-Gerard*, not, as it seems, from our old herbalist, for according to *Dodonæus* that name is of Flemish origin; and though our countryman repeats it often in his herbal, with apparent complacency, he does not appropriate it to himself.



VIBURNUM Lantana.

*Mealy Guelder-rose, or Way-faring Tree.**PENTANDRIA Trigynia.*

GEN. CHAR. *Cal.* superior, of five leaves. *Cor.* in five segments. *Berry* with one seed.

SPEC. CHAR. Leaves heart-shaped, serrated, veiny, downy beneath.

SYN. *Viburnum Lantana.* *Linn. Sp. Pl.* 384. *Huds. Fl. An.* 129. *With. Bot. Arr.* 318. *Relh. Cant.* 126. *Sibth. Ox.* 104.

Viburnum. Raii Syn. 460.

RAY mentions this shrub as growing in a clay soil. We have observed it most plentifully, and apparently in its true wild situation, in chalky places, as about Henley, Oxfordshire; not but that it occurs also here and there in the woods and hedges of most parts of England, flowering in May.

It is a thickly-branched shrub or small tree, growing to a larger size in the north of England (as Ray also remarks) than in the south; its twigs round, pliant, and mealy, with the same kind of tufted stellated pubescence as is found on the flower-stalks, backs, and even upper sides of the leaves. The leaves are opposite, as in the whole genus, somewhat elliptical, heart-shaped at the base, obtuse, serrated, strongly veined, without stipulæ. Flowers in large terminal cymes, white, with yellowish antheræ. Stigmas sessile; very short and thick. Berries compressed. When young (as in our figure) they are red on the outermost side, yellow on the other; but when quite ripe they turn black. They have a little mealy astringent pulp. Seed large, flat and furrowed.

This is supposed to be the *Viburnum* of Virgil; but the poet says nothing by which it can be ascertained, mentioning it only in his 1st eclogue, ver. 26.

The leaves turn dark red in autumn.



VIBURNUM Opulus.

*Common Guelder-rose, or Water Elder.**PENTANDRIA Trigynia.*

GEN. CHAR. *Cal.* superior, of five leaves. *Cor.* in five segments. *Berry* with one seed.

SPEC. CHAR. Leaves lobed; their foot-stalks set with glands:

SYN. *Viburnum Opulus.* *Linn. Sp. Pl.* 384. *Huds. Fl. An.* 130. *With. Bot. Arr.* 318. *Relh. Cant.* 127. *Sibth. Ox.* 104.

Opulus. *Raii Syn.* 460.

THIS shrub is common in woods and hedges in watery places, flowering early in June; the bright-red berries ripen about September, and towards the middle of October the leaves assume a beautiful pink-colour, affording another instance, in addition to that of the Cornel (see tab. 249), of a genus, mostly American, the leaves of which turn red in autumn. In gardens the Guelder-rose, bearing round bunches of abortive flowers only, is very common, elegantly grouping with the Lilac and Laburnum in the early part of summer.

It is a small bushy tree, smooth in all its parts. Leaves with three great, unequally serrated, lobes; their foot-stalks bearing several cup-like glands towards the top, and a pair or two of erect linear appendages, scarcely to be called stipulæ, near the base. Cymes of many white flowers; the perfect ones small, resembling elder; abortive ones in the margin, each consisting merely of a large irregular flat petal, without organs of fructification. Stigmas nearly sessile, close together. Berries drooping, very succulent. Seed flat, heart-shaped.



S A M B U C U S Ebulus.

*Dwarf Elder, or Dane wort.**PENTANDRIA Trigynia.*

GEN. CHAR. *Cal.* in 5 segments. *Cor.* 5-cleft. *Berry* with 3 seeds.

SPEC. CHAR. Cymes with three principal branches. *Stipulæ* leafy. Stem herbaceous.

SYN. *Sambucus Ebulus.* *Linn. Sp. Pl.* 385. *Huds.* 130. *With.* 316. *Relb.* 127. *Sibth.* 104. *Curt. Lond. fasc.* 3. t. 18.

S. humilis seu *Ebulus.* *Raii Syn.* 461.

THE Dwarf Elder grows here and there in waste ground throughout Britain, not commonly, though in great plenty wherever it occurs at all, as the creeping roots spread very far, and are scarcely to be eradicated. It is plentiful at Honingham, Norfolk. Our specimen grew in Lambeth Marsh. It flowers after midsummer, and ripens its berries late in autumn, which however, like the fruit of other creeping-rooted plants, are rarely perfected.

The stems are herbaceous, three feet high, erect, roundish, furrowed, leafy. Leaves pinnate, dark-green, smoothish, the leaflets ovato-lanceolate, acute, serrated; unequal and generally glandular at their base. *Stipulæ* large, leafy, serrated, sometimes accompanying a pair of the leaflets as well as the whole leaf. Cyme terminal, of three principal branches, and many small ones, which are hairy. All the flowers stand on footstalks. Calyx small, purple. Petals of a dull blood-red. Stamina thick, white, with red antheræ, whose lobes are distant. Berries globular, of a purplish black, with three, sometimes four, seeds.

The whole plant is foetid, and violently purgative. No cattle will eat it. Moles will not come where the leaves of this species, or even the common Elder, are laid. A rob of the berries, though actively cathartic, may be used with tolerable safety as far as the dose of an ounce; but it has the inconveniences of Senna, and is in no respect to be preferred to that drug.



SAMBUCUS nigra.

Common Elder.

PENTANDRIA Trigynia.

GEN. CHAR. *Cal.* in five segments. *Cor.* 5-cleft. *Berry* with 3 seeds.

SPEC. CHAR. Cymes with five principal branches. Leaflets ovate. Stem a tree.

SYN. *Sambucus nigra.* *Linn. Sp. Pl.* 385. *Huds.* 130. *With.* 316. *Relb.* 128. *Sibth.* 105. *Woodv. Med. Bot. t.* 78.

Sambucus. *Raii Syn.* 461.

ABUNDANT every where in hedges and groves, flowering in June, and ripening its berries copiously in September.

This species grows to a middle-sized bushy tree, with a smooth grey bark when young. The branches are opposite, leafy, of quick growth, and full of a light white pith, which is put to various uses for which such a substance is required. The pinnated leaves consist of about 5 oval, pointed, serrated leaflets, nearly equal at their base, and have no stipulæ, or very small ones. Cymes terminal, solitary, of 5 principal branches, and many small ones, and some of the flowers are sessile. Flowers cream-coloured, with a faint smell, especially when dried. Berries globular, purplish black.

This tree is as it were a whole magazine of physic to rustic practitioners, nor is it quite neglected by more regular ones. Ointments are made of the green inner bark, which is also a strong purgative: the dried flowers infused in water are used in fomentations, or as tea, though in the latter capacity they are weakening to the nerves: the berries are boiled into a rob, which is really useful in sore throats and catarrhs, and acts as a gentle laxative in febrile disorders. The leaves laid into the subterraneous paths of the mole drive it away; and an infusion of them is extremely useful for curious gardeners to sprinkle over the buds of such flowers as they wish to preserve from minute caterpillars, as few insects can bear the Elder. The *Phalena Sambucaria*, however, feeds on this plant, and the colouring of its delicate wings seems to imitate the blossoms.



July 1, 1908. Collected by J. H. Sargent

[1560]

STAPHYLEA pinnata.

Bladder-nut Tree.

PENTANDRIA Trigynia.

GEN. CHAR. *Cal.* inferior, in 5 segments. *Pet.* 5.
Capsules inflated, joined together. *Seeds* 2, glo-
 bose, with a scar on one side.

SPEC. CHAR. Leaves pinnated. Styles and capsules
 but two.

SYN. *Staphylea pinnata.* *Linn. Sp. Pl.* 386. *Sm. Fl.*
Brit. 337. *Huds.* 131. *With.* 317. *Hull.* 65.
Ehrh. Arb. 103.

Staphylodendron. *Raii Syn.* 468.

WE have drawn this from garden specimens. Parkinson observed it about Ashford in Kent, and Ray about Pontefract, Yorkshire; but the latter doubted its being really wild. Our accurate friend Mr. Hailstone, however, judges it to be truly indigenous in the last-mentioned county. It blossoms in May or June; and the fruit, for the singular appearance of which it is chiefly remarkable, is perfected rather late in autumn.

The stem is shrubby, branched and divaricated, five or six feet high. Leaves opposite, (not alternate,) pinnate, consisting of two pair, and an odd one, of ovate, smooth, serrated leaflets, accompanied by general and partial membranous stipulæ. Flowers in compound terminal bunches, yellowish, interspersed with narrow bractææ. Capsules two, rarely 3, together, membranous and inflated, each containing two large, globular seeds, which when ripe are hard, light brown, and look as if varnished.



Tab. 1. 1860. Published by J. E. Sowerby, London.

[1318]

TAMARIX gallica.

French Tamarisk.

PENTANDRIA Trigynia.

GEN. CHAR. *Cal.* inferior, in 5 segments. *Petals* 5.
Caps. of 1 cell, with 3 valves. *Seeds* feathery.

SPEC. CHAR. *Stamina* five.

SYN. *Tamarix gallica.* *Linn. Sp. Pl.* 386. *Sm. Fl. Brit.* 338. *With.* 318. *Sym.* 77. *Hull.* 66. *Tr. of Linn. Soc. v. 3.* 333.

Tamariscus Narbonensis. *Ger. em.* 1378.

GATHERED by Mr. Menzies at Hastings. Though not mentioned by the botanists of Ray's time, it seems entitled to a place in our Flora, being plentiful about the coasts of Cornwall, Hampshire and Sussex, growing on rocks and banks, exactly as in Italy and France, where it is undoubtedly wild. We are not deterred from admitting it by vague reports of its having been brought from France in the 17th century. It might nevertheless have been always growing wild in England, as seems to have been the case with Hops; nor was there any occasion to bring from France what had certainly long been common in our own gardens.

It is an elegant, drooping, slender-branched shrub, with red shining twigs. Leaves minute, imbricated, deciduous, rather fleshy, acute, smooth, spurred at the base. The flowers appear about July in long cylindrical clusters, with little awlshaped bractæ. Calyx small, can panulate, smooth. Petals white or reddish. Stamina 5, smooth, equal. Germen ovate, with 3 styles, and blunt stigmas. Capsule pyramidal. Seeds numerous, with feathery wings.

Sheep are excessively fond of this shrub, perhaps on account of its saltish flavour, and devour it with avidity.



Juniperus communis L. var. *horizontalis* Moench

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CORRIGIOLA littoralis.

Sand Strapwort.

PENTANDRIA Trigynia.

GEN. CHAR. *Cal.* inferior, of 5 leaves. *Petals* 5.
Seed one, naked, obtusely three-cornered.

SPEC. CHAR.

SYN. *Corrigiola littoralis.* *Linn. Sp. Pl.* 388. *Sm.*
Fl. Brit. 339. *With.* 318. *Hull.* 66. *Dicks. Dr.*
Pl. 61. *H. Sicc. fasc.* 14. 10.

MR. HUDSON was the original discoverer of this plant in England, but not till after the publication of the second edition of his *Flora*. He found it on Slapham sands near Dartmouth, Devonshire. The late Francis Borone gathered it on the beach near the tin mine at Helston, Cornwall; and from seeds communicated by him, the specimen here delineated was raised by Mrs. Kett in her garden at Seething. As it is not at all altered by culture, and Mr. Sowerby with Mr. Turner sought for the wild plant in vain this summer, we trust our figure will not be unwelcome.

The root is annual, and the flowers appear profusely in July and August. Stems numerous, spreading prostrate on the ground in every direction, like knot-grass; they are round, smooth, but little branched. Leaves alternate, linear-lanceolate, obtuse, entire, tapering at the base, glaucous, smooth, a little fleshy, with a pair of membranous stipulæ at their insertion. Flowers in terminal and lateral clusters, small, of a pearly hue, the leaves of the calyx being bordered with white, and the petals white also. Germen and antheræ purplish. Styles 3, short, spreading. Seed black and shining.



PARNASSIA palustris.

*Grass of Parnassus.**PENTANDRIA Tetragynia.*

GEN. CHAR. *Calyx* five-cleft. *Petals* five. *Nectaries* five, heart-shaped, fringed with bristles terminated by little balls. *Capsule* with four valves.

SPEC. CHAR. . . .

SYN. *Parnassia palustris*. *Linn. Sp. Pl.* 391. *Huds.*

Fl. An. 131. *Witb. Bot. Arr.* 325. *Relb. Cant.* 129.

P. vulgaris et palustris. *Raii Syn.* 355.

PERHAPS the nectary of the *Parnassia palustris* is more elaborate in structure than that of any other British vegetable. We regret that its physiology is unknown. What share those capillary protuberances, tipped with pellucid globes, have in the formation of honey, is very doubtful, though that fluid is found about the lower part of the organ which supports them. These parts however form an excellent generic character, and there is but one species of the genus. Theoretical botanists are not agreed about its affinities, except that it is allied to *Drosera*, and we think also to *Dionæa* and *Saxifraga*, though Mr. De Jussieu separates them all widely; but he seems not decided in his opinion. The *Parnassia* agrees with *Saxifraga* in the wonderful oeconomy of its impregnation, which is performed by one of the stamina at a time coming over the stigma, and retiring again as soon as it has shed its pollen. Its place is then supplied by another, till all have presented themselves in turn, and then the stigma closes. Sometimes two come together, or nearly so. Rue exhibits the same phenomenon.

This plant is common on bogs in the northern counties as well as in Norfolk, and produces its elegant milk-white flowers in August and September. The petals are curiously veined with pellucid lines; they preserve their whiteness when dried. The stem is angular and twisted: root perennial.



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STATICE Armeria.

Thrift.

PENTANDRIA *Pentagynia.*

GEN. CHAR. *Cal.* of one leaf, entire, plaited, filmy.
Petals five. *Seed* single.

SPEC. CHAR. Stalk simple, bearing a round head of flowers. Leaves linear.

SYN. Statice Armeria. *Linn. Sp. Pl.* 394. *Huds. Fl. An.* 132. *With. Bot. Arr.* 326. *Relb. Cant.* 129. *Lightf. Scot.* 173.

S. montana minor. *Raii Syn.* 203.

“THE most humble and most lofty of plants,” says Mr. Lightfoot; “it grows frequently upon the sea-shores, and upon the summits of the highest mountains.” Neither is it less common in England and Wales than in Scotland, in both kinds of situations. We have examined it from both, and found no difference between the specimens. Its favourite maritime soil is of the muddy kind. The constitution of this plant indeed seems of a very accommodating nature; for it grows equally well in any garden, even in the smoke of London, and is much used for edgings. From its readiness to thrive in any situation, the English name has probably been given. It flowers about July and August.

Root perennial, woody, bearing many thick tufts of lax, linear, channelled, smooth, entire leaves. Stalks varying much in height, round, naked, each terminated by a globular head of several flowers, encompassed with a many-leaved involucre, whose base is attached to a singular cylindrical membranous sheath, about an inch long, which invests the top of the stalk, its lower end being loose and lacerated, so that it seems to have been torn off from the root, and carried up with the young growing stalk. Calyx small, erect. Petals rose-coloured. Crown of the seed fringed.



STATICE Limonium.

Sea Lavender.

PENTANDRIA Pentagynia.

GEN. CHAR. *Cal.* of one leaf, entire, plaited, filmy.
Petals five. *Seed* single.

SPEC. CHAR. Stalk panicled, round. Leaves smooth,
destitute of nerves, tipped with a small point.

SYN. Statice Limonium. *Linn. Sp. Pl.* 394. *Huds.*
Fl. An. 132. *With. Bot. Arr.* 327.

Limonium. *Raii Syn.* 201.

GATHERED last August by Lord Viscount Lewisham on Woldham Marsh near Rochester. The plant loves a muddy soil in salt marshes, or on the shores of great rivers washed by the tide, and flowers late. Scarcely any vegetable is more various as to luxuriance, being sometimes found with leaves scarcely an inch long, and not more than six or eight flowers in the panicle, while at other times it is even much more large and its flowers more abundant than in the specimen before us. The bright blue colour distinguishes it at a distance, and that colour is tolerably permanent. Though less magnificent than some foreign species of its genus, this is a very beautiful plant. Its appearance scarcely enough resembles lavender to justify the English name, nor has it any aromatic quality. The root is strong and perennial.



STATICE reticulata.

Matted Sea Lavender.

PENTANDRIA Pentagynia.

GEN. CHAR. *Cal.* of one leaf, entire, plaited, filmy.
Petals five. *Seed* single.

SPEC. CHAR. Stalk panicled, prostrate; its branches zigzag, the barren ones bent back. Leaves wedge-shaped, a little pointed.

SYN. *Statice reticulata.* *Linn. Sp. Pl.* 394, *Huds. Fl. An.* 133, *With. Bot. Arr.* 327.

THIS species of *Statice* is hardly to be found in any other part of Great Britain than on the coast of Norfolk, where it covers many acres of muddy salt marshes with its blue flowers in July and August, especially about Wells, Cley and Holkham. Our specimen was gathered below Wisbeach, by the Rev: Mr. Hemsted.

Root strong, woody and perennial, bearing thick tufts of small, narrow, obovate, or wedge-shaped, leaves, slightly pointed, and entire. Stalks prostrate, destitute of leaves, very much branched, the branches zigzag, matted and entangled with each other, with an ovate, sharp, membranous bractea at each divarication. The bark in our specimens is a little crisped and tuberculated, which we do not observe in the Linnæan ones. Many of the branches are barren, and those often reflexed, but not always. Flowers few together in simple terminal spikes, erect, each enveloped in three or four larger sheathing bractæ. The ribs of the calyx, and the petals, are of a bright purplish blue, which turns white in drying.

There cannot be said to be a good figure of this plant extant. Plukenet's *t.* 42. *f.* 4. is most like *S. echioides*, and Boccone's *Sic. t.* 44. is too imperfect to be of any service,



[1357]

LINUM usitatissimum.*Common Flax.**PENTANDRIA Pentagynia.*

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5. *Capsule* superior, with 10 valves and 10 cells. *Seeds* solitary.

SPEC. CHAR. Calyx-leaves ovate, acute, three-nerved. Petals crenate. Leaves lanceolate, alternate. Stem mostly solitary.

SYN. *Linum usitatissimum.* *Linn. Sp. Pl.* 397. *Sm. Fl. Brit.* 342. *Huds.* 133. *With.* 321. *Hull.* 66. *Relh.* 127. *Abbot.* 71. *Curt. Lond. fasc.* 5. t. 22. *Woodv. Med. Bot.* t. 111. *Mart. Rust.* t. 133.
L. sylvestre, sativum planè referens. Raii Syn. 362.

NOT unfrequent in cultivated fields, flowering in July.

Root annual and fibrous. Stem upright, about a foot and half high, generally solitary, round, leafy, smooth; simple below; alternately paniced above. Leaves numerous, alternate, sessile, ovate or lanceolate, entire, 3-ribbed, smooth, rather glaucous; for the most part sharp-pointed, the lower ones only being short, broad and blunt. Flowers upright, paniced, blue with a silky gloss; their petals obovate, veiny and crenate; their calyx-leaves smooth, acute, with 3 prominent ribs, and a membranous irregular margin. Stamina united at their base. Stigmas thicker upwards. Capsule pointed. Seeds elliptical, compressed, brown, highly polished.

The use of this valuable plant for producing the finest thread is well known. Its seeds abound with mucilage, which they impart to water, and afford by expression the common Linseed Oil.



Ranunculus acris L. *Pubescens* L. *Scutellaria* L.

L I N U M perenne.

*Perennial Flax.**PENTANDRIA Pentagynia.*

GEN. CHAR. *Calyx* five-leaved. *Petals* five. *Capsule* with five valves and ten cells. *Seeds* solitary.

SPEC. CHAR. *Calyx* and *capsule* bluntish. *Leaves* alternate, lanceolate, entire.

SYN. *Linum perenne*. *Linn. Sp. Pl.* 397. *Huds. Fl. An.* 133. *Witb. Bot. Arr.* 329. *Relb. Cant.* 130.

Linum sylvestre cæruleum perenne erectius, flore & capitulo majore, et

Linum sylvestre cæruleum perenne procumbens, flore & capitulo minore. Raii Syn. 362.

WE trust to the authority of Mr. Hudson, and the above-mentioned authors who have copied him, in making these two plants of Ray's Synopsis varieties of each other. Ray himself hints that he thought them such; and Hudson asserts he has gathered both from the same root; adding, that in the procumbent variety the stamina are shorter than the styles, in the erect one longer.

Linum perenne is found in the driest chalk soil of Northamptonshire, Cambridgeshire, and Norfolk. Its strong and knobbed woody root produces a multitude of slender stems, about a foot long, spreading in every direction, but more or less curved upward. Its flowers appear from June to August; they are of a delicate texture, and very elegant blue colour. The calyx, as Dr. Stokes observes, is quite smooth, and each of its leaves marked with five ribs; the middlemost of which is the strongest.



Samolus L.

✓

L I N U M angustifolium.

*Narrow-leaved Flax.**PENTANDRIA Pentagynia.*

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5. *Caps.* with 10 valves and 10 cells. *Seeds* solitary.

SPEC. CHAR. Calyx obsoletely three-nerved, sharp-pointed, as well as the capsule, and linear-lanceolate three-nerved leaves. Stems numerous, a little inclined.

SYN. *Linum angustifolium.* *Huds. Fl. An.* 134. *Witb. Bot. Arr.* 329.

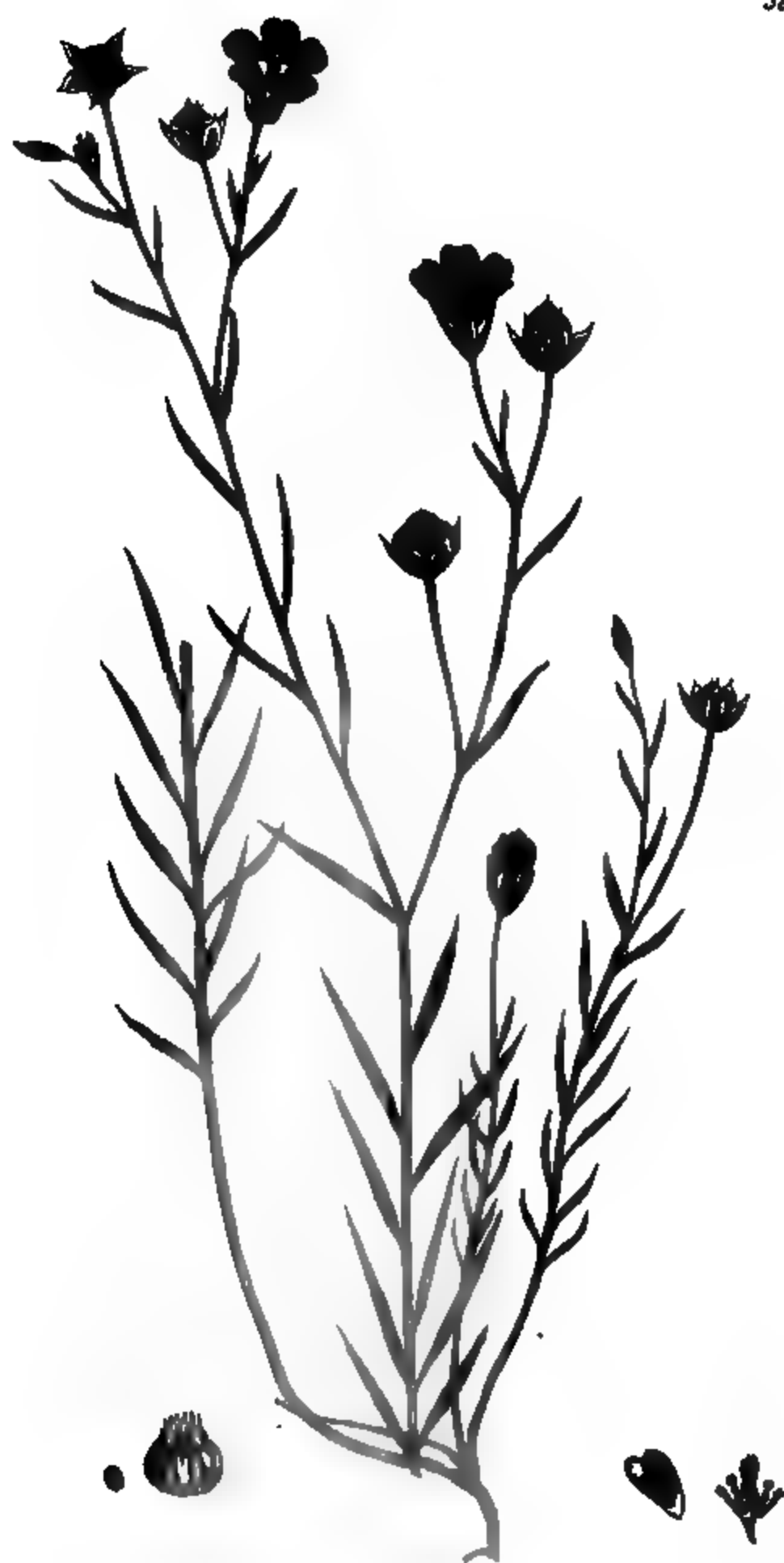
L. tenuifolium ? *Linn. Sp. Pl.* 399.

L. sylvestre angustifolium, floribus dilute purpureiscentibus vel carneis. *Raii Syn.* 362.

COMMUNICATED by D. E. Davy, Esq. who found it wild in great plenty at Darham, Suffolk, flowering in July. It occurs in dry sandy pastures, especially near the sea; and is said to be most plentiful in Cornwall and Devonshire.

Linnæus very improperly confounded this with his *L. tenuifolium*, which has a very long-pointed calyx with glandular serratures, and leaves with rough edges and only a central nerve. That is Haller's No. 838, as we learn from Mr. Davall. Ours is most nearly allied to *L. usitatissimum* in the structure of all its parts, except in having a woody perennial root producing many stems; it differs also at first sight in having smaller paler flowers. The leaves have 3, sometimes 5, nerves, their edges entire and smooth. Calyx-leaves smooth, elliptical, with a sharp point; in the flowering state scarcely more than one nerve is visible, but as the fruit ripens the calyx becomes distinctly 3-nerved. The petals are entire, or slightly notched. Valves of the capsule distinctly 10, cohering by their inflexed margins, which make the partitions of the 10 cells. We have therefore altered the generic character, as M. de Jussieu has done, to 10 (not 5) valves. We cannot however agree with that learned botanist in referring this genus to his order of *Caryophylles*. Surely it belongs to the *Gerania*. The cells of the capsule are closely analogous to *arilli*, and about the rest of the characters there can be no doubt. See *Juss. Gen.* 303.

L. perenne, tab. 40, is sufficiently distinguishable from this species by its more obtuse 5-nerved calyx, and more capitate stigmas.



... 1 ...

L I N U M catharticum.

*Purging Flax.*P E N T A N D R I A *Pentagynia.*

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5. *Caps.* with 10 valves and 10 cells. *Seeds* solitary.

SPEC. CHAR. Leaves opposite, obovato-lanceolate. Stem forked. Petals pointed.

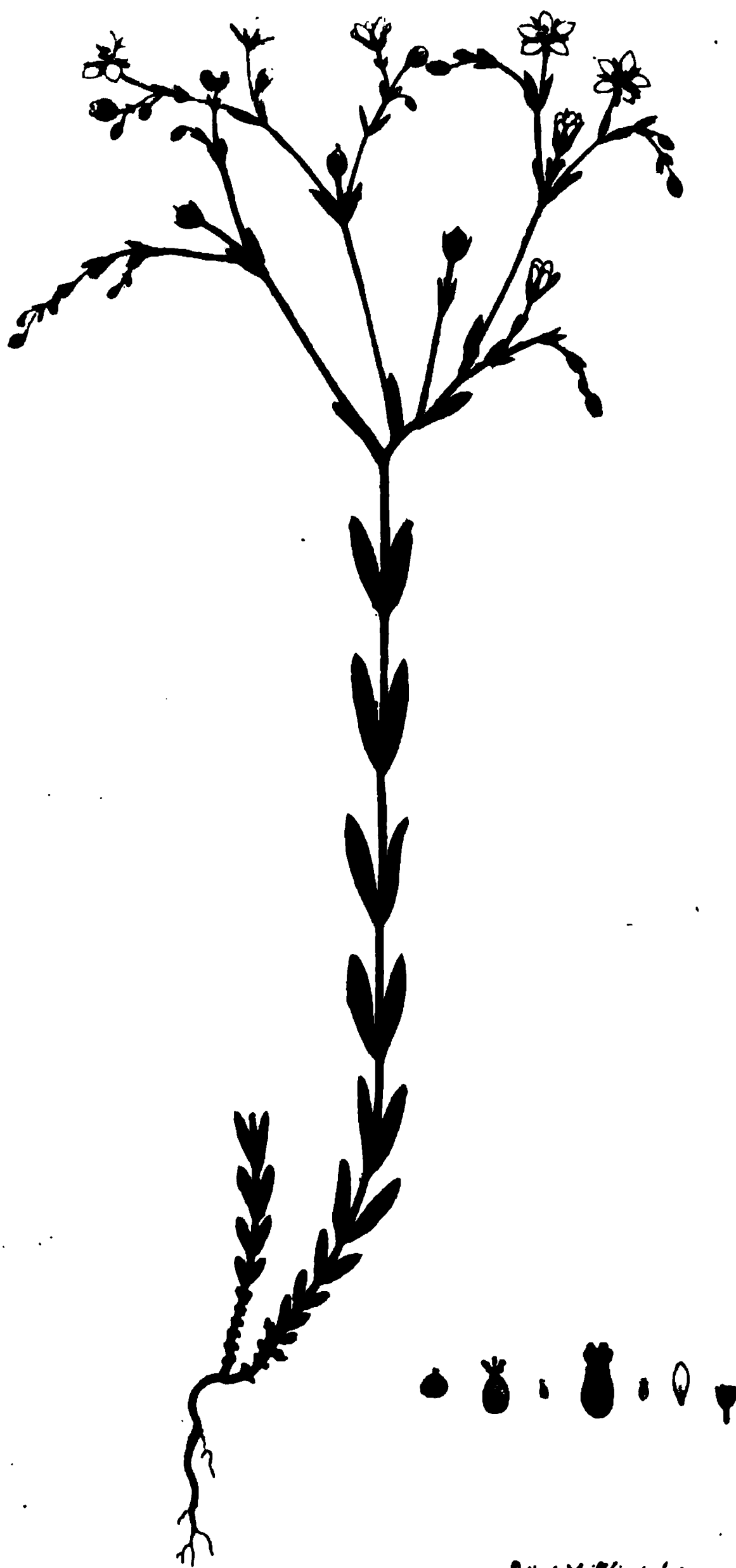
SYN. *Linum catharticum.* *Linn. Sp. Pl.* 401. *Huds. Fl. An.* 134. *With. Bot. Arr.* 330. *Relb. Cant.* 131. *Sibth. Ox.* 106. *Curt. Lond. fasc.* 3. t. 19. *Mart. Fl. Rust.* t. 135. *Dicks. H. Sicc. fasc.* 3. 7.

L. sylvestre catharticum. *Raii Syn.* 362.

VERY common in dry open hilly pastures, where it may be found in flower from June to the end of August.

The root is annual and very small. Stems several, round, bowed at the base, then upright and simple, till they branch off into a forked, leafy, slender-stalked panicle. Leaves opposite, sessile, upright, inclining to an obovate or elliptical form, obtuse with a slight point, entire, glaucous beneath. The whole herb is smooth. When the panicle begins to branch off, its lower branches, as well as the leaves that accompany them, are alternate. Flowers terminal, solitary, drooping in the bud, then erect, white, not unlike those of an *Arenaria*. Calyx-leaves ovato-lanceolate, pointed, serrated, with a solitary nerve. Petals obovate, pointed. Stamina monadelphous. Stigmas capitate. Capsule with 10 valves, but before they are quite ripe they cohere in pairs by means of the permanent styles.

Gerarde calls this Mill-mountaine, and celebrates it as a purge on the authority of a Bishop of Bath and Wells, who used it commonly for that purpose. His receipt is a handful of the herb infused in a pint of warm white wine all night, and drunk in the morning. Dr. Withering recommends an infusion of 2 drams or more of the dried herb, as an excellent cathartic (and sometimes a diuretic) in many obstinate rheumatisms.



Androsace 7987 collected by P. H. Ravn, Denmark.

SIBBALDIA procumbens.

Procumbent Sibbaldia.

PENTANDRIA Pentagynia.

GEN. CHAR. *Cal.* in 10 segments. *Petals* 5, standing on the calyx. *Styles* from the side of the germen. *Seeds* 5, in the bottom of the calyx.

SPEC. CHAR. Leaflets wedgeshaped, three-toothed.

SYN. *Sibbaldia procumbens.* *Linn. Sp. Pl.* 406.

Sm. Fl. Brit. 345. *Huds.* 136. *Witb.* 326.

Hull. 68. *Lightf.* 175. *Dicks. H. Sicc. fasc.* 10. 12.

Pentaphylloides pumila, foliis ternis ad extremitates trifidis. *Raii Syn.* 256.

THE summits of the highland mountains abound with the *Sibbaldia procumbens*, which thrives there in a mouldering micaceous soil full as luxuriantly as in any garden, and may be found in flower throughout July. We have gathered it on Ben Lomond. The present specimen was sent by Mr. Mackay.

Roots woody, tufted and perennial. Stems short, spreading and procumbent, except sometimes at their flowering extremities, leafy, round, downy. Leaves on long footstalks with a pair of oblong acute stipulæ, like those of a rose, united to their base; leaflets three, on short partial stalks, wedgeshaped, terminating in 3 large teeth, but otherwise entire, a little hairy. Flowers in a sort of small leafy corymbus, minute and inconspicuous, with a hairy calyx cut into 10 lobes alternately larger and smaller, and bearing 5 little oblong yellow petals and as many stamina, placed on a thickened rim, as is proper to the rosaceous order to which this genus belongs. Germen of 5, rarely 10, little round embryos, each bearing a small lateral style. The seeds are dry, small and roundish.

Sir Robert Sibbald first described and figured this plant in his *Scotia Illustrata* published in 1684, and it therefore deservedly bears his name.

877



DROSER A rotundifolia.

Round-leaved Sun-dew.

PENTANDRIA Hexagynia.

GEN. CHAR. *Cal.* 5-cleft. *Petals* 5. *Caps.* superior of 1 cell, with 3 valves. *Seeds* many.

SPEC. CHAR. Leaves orbicular, radical, depressed. Footstalks hairy. Stalk bearing a simple racemus.

SYN. *Drosera rotundifolia*. *Linn. Sp. Pl.* 402. *Sm. Fl. Brit.* 346. *Huds.* 135. *Witb.* 323. *Hull.* 67. *Relb.* 131. *Sibth.* 106. *Abbot.* 71.

Ros solis folio rotund *Raii Syn.* 356.

EVERY *Drosera* hitherto discovered grows in boggy situations. Our British species are far from uncommon in very wet black spongy bogs, for the most part over a gravelly or sandy soil. They flower in July and August, and are all, we believe, perennial.

The *rotundifolia* is perhaps the most common. Its root is black and fibrous. Leaves numerous, on hairy footstalks, radical, depressed, and forming a sort of star on the ground or surrounding moss, very conspicuous by their mingled green and red colour, the latter of which chiefly resides in the numerous glandular bristles, each tipped with a clear viscid globule, which ornament the margin and surface of the leaves, and which, by a degree of irritability lately observed by some naturalists, are thought to contract, and to imprison insects, like the Canadian *Dionaea*, a plant of the same Natural Order. This irritability, if it exists, is only to be detected in hot sunny days, nor indeed do the flowers expand in any other weather. A few erect simple naked stalks rise from the crown of the root, each bearing a simple *racemus*, or rather, perhaps, a spike, of white or blush-coloured flowers, with always 5 petals and as many stamina, and 3 pair of spreading recurved styles. The parts of fructification have not been found to vary in number in this species. Sometimes the stalk is reported to be branched.



DROSERA longifolia.

*Long-leaved Sun-dew.**PENTANDRIA Hexagynia.*

GEN. CHAR. *Cal.* 5-cleft. *Pet.* 5. *Caps.* superior, of 1 cell, with 3 valves. *Seeds* many.

SPEC. CHAR. Leaves obovate, radical, upright. Stalk bearing a simple racemus.

SYN. *Drosera longifolia.* *Linn. Sp. Pl.* 403. *Sm. Fl. Brit.* 347. *Huds.* 135. *With.* 324. *Hull.* 67. *Relb.* 132. *Abbot.* 72. *Dicks. H. Sicc. fasc.* 14. 9. *Ros folijs folio oblongo.* *Raii Syn.* 356.

THIS species is found in the same situations as the *D. rotundifolia*, though somewhat less frequently, and flowers at the same season.

In root and general habit it altogether agrees with the former, differing chiefly in its leaves, which are not depressed, but nearly erect, standing on long stalks, and their form is exactly obovate, not orbicular. For another mark of distinction we are obliged to Dr. Hull, (who has enriched his *Flora* with several good observations on the genus,) that the footstalks of the leaves in the *rotundifolia* are hairy; in this and the *anglica* they are smooth, and we find this difference constant. The styles of the *longifolia*, according to this author, vary from 6 to 8 full as often as in *D. anglica*. The petals and stamina also are frequently 6.

Caulescent varieties of this and the preceding have been found by the late Dr. Withering, whose specimens are now before us, as well as by the present worthy botanical Professor of Oxford. Dr. Hull mentions only the *longifolia* in such a state. We are persuaded these are merely varieties, in which we are confirmed by the analogy of *Carduus*, *Carlina* and *Onopordum*, (some would add *Primula*,) in which species that are truly *acaules* become caulescent by luxuriant nourishment.



April 1891 Published by J. W. & M. J. W. W.

DROSERA anglica.

*Great Sun-dew.**PENTANDRIA Hexagynia.*

GEN. CHAR. *Cal.* 5-cleft. *Pet.* 5. *Caps.* superior, of 1 cell, with 3 valves. *Seeds* many.

SPEC. CHAR. Leaves oblong, obtuse, radical, upright. Styles eight. Capsules with four valves.

SYN. *Drosera anglica.* *Huds.* 135. *Sm. Fl. Brit.* 347. *With.* 324. *Hull.* 68. *Abbot.* 72. *Dicks. H. Sicc. fasc.* 2. 7.

Rorella longifolia maxima. *Raii Syn.* 356.

LINNÆUS has not noticed this species. It is by far less frequently met with than either of the others. We have gathered it in Norfolk, and have received it from the Rev. Mr. Abbot, as well as from Dr. Hull. It is most nearly related to the *D. longifolia*, but is generally twice as large. Dr. Hull thinks it not more frequently furnished with 8 styles than that species. We have however found 8 petals and as many stamina in some plants, a number exceeding any observed in the *longifolia*. The more elongated form of the capsule mentioned by Dr. Hull promises to be a good discriminative mark, but we have not had an opportunity of observing it. The base of the flower-stalk being curved or straight, seems to us variable.

The most certain character of this species seems to consist in the oblong and almost linear form of its leaves, which we have not found to vary. Our opinion is confirmed by the observations of the Rev. Mr. Forby, who finds both these plants in the same situation, and even entangled together, but always retaining this difference in their foliage, however the parts of fructification may vary in number.

Some theoretical doctors of old, seeing the perpetual moisture on the Sun-dew even in the greatest heat, thought it would be a good medicine for consumptive patients, whose moisture they supposed to be drying up. But good old Gerarde confesses that those who took this new restorative died the soonest; which is no wonder, considering its acrid nature.



Phlox subulata L.

MYOSURUS minimus.

*Mouse-tail.**PENTANDRIA Polygynia.*

GEN. CHAR. *Cal.* of 5 leaves, each with a spur at the base. *Petals* 5, with a tubular claw. *Seeds* numerous.

SPEC. CHAR.

SYN. *Myosurus minimus.* *Linn. Sp. Pl.* 407. *Huds.* 136. *With.* 326. *Relh.* 132. *Sibth.* 107. *Curt. Lond. fasc.* 4. t. 26.

Myosuros. *Raii Syn.* 251.

A NATIVE of gravelly corn-fields, not unfrequent about London. It has also been observed in several parts of Norfolk, always flowering in the early part of summer; after which it soon sheds its seeds, and withers away.

Root annual, fibrous, very small. Herb smooth, varying extremely in size according to the luxuriance of the soil. Stem none. Leaves numerous, nearly upright, a little fleshy, of a linear somewhat spatulate form, entire, pale green. Stalks several, upright, longer than the leaves, simple, round, a little thicker upwards, each bearing a small, erect, pale yellowish flower. Calyx of 5 elliptical concave leaves, spurred at the base below their insertion. Petals 5, scarcely longer than the calyx, pale, slender, consisting of a honey-bearing tubular claw, and a short spreading lanceolate border. Stamina generally about 5, but in luxuriant plants much more numerous, the length of the corolla, with vertical linear antheræ. Pistillum conical, longer than the stamina, composed of a conical receptacle, covered with a great number (even 2 or 3 hundred) of ovate, striated germens, each furnished with its own minute sessile stigma. This plant affords a remarkable and rare instance of a very great disproportion of males to females in the same flower, and yet the latter are generally all prolific. The seeds are justly described by Linnæus as naked; for the part which Jussieu denominates a capsule, is surely nothing more than a thickened inseparable coat, as in *Ranunculus*, to which the *Myosurus* very nearly belongs; there being the closest affinity between the nectariferous pore in the claw of the petals in that genus, and the tubular claw of *Myosurus*.



*178. *Scilla* / *Scilla* *Scilla**

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